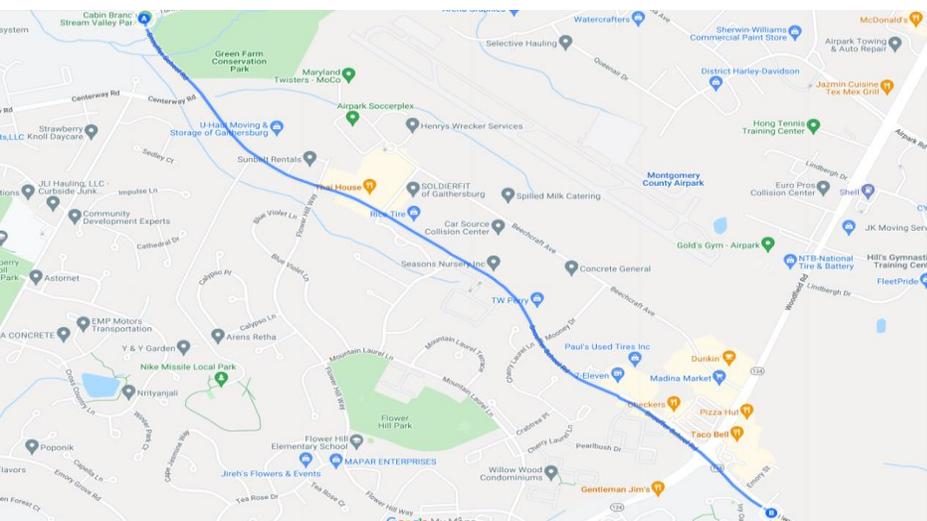




Snouffer School Road

High Injury Network Analysis and Report
Centerway Road to MD 124 (Woodfield Road)



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1. INTRODUCTION

Montgomery County’s Vision Zero Two Year Action Plan, dated November 2017, established a goal of reaching zero fatal and serious injury crashes on roadways in Montgomery County by the year 2030. To achieve this goal, the County identified roadway segments where fatal and serious injury crashes were concentrated. These roadway segments comprise the County’s *High Injury Network (HIN)*, where roadway safety improvement efforts are prioritized.

Subsequent Vision Zero Plans (including the 2020 Action Plan, 2030 Action Plan, and FY 22-23 Work Plan) expand on the work from the 2017 Two Year Action Plan by implementing recommendations from completed studies, advancing on-going initiatives, completing open action items, and identifying priority action items to assist with future budgeting and implementation decisions. In particular, the 2030 Action Plan and FY 22-23 Work Plan group all action items into one of three pillars to highlight the primary role roadway design and operation has on reducing traffic deaths. These three pillars include Complete Streets, Multimodal Future, and Culture of Safety. One priority action item under the Complete Streets pillar, labeled as “S-1: High Injury Network Projects”, calls for implementing safety countermeasures on identified high-risk road segments and intersections (i.e., HIN roadways).

The 1.2-mile segment of Snouffer School Road between Centerway Road and MD 124 (Woodfield Road), located in Gaithersburg, Maryland, was identified as an HIN roadway based on its crash history. This study includes the analysis of fatal, serious, and minor injury crashes, along with recommended improvements to increase safety for all roadway users in the Snouffer School Road corridor.

2. BACKGROUND

Study Area

The primary audit study limits include Snouffer School Road, extending from Centerway Road to MD 124 (Woodfield Road) in Gaithersburg, Maryland (see **Figure 1**). Snouffer School Road is considered a Boulevard based on Montgomery County’s *Complete Streets Design Guidelines (CSDG)* street types, and is assumed to run in an east-west direction for this study. It consists of four through lanes (two in each direction), with a narrow concrete median between MD 124 and Sweet Autumn Drive, and a two- way, left-turn lane (TWLTL) from Sweet Autumn Drive to Centerway Road. Turning bays are present at each signalized intersection. The posted speed limit is 40 mph. There are several driveway entrances/access points to various shopping centers, industrial developments, and residential developments throughout the corridor.

Concrete sidewalks are present along EB and WB Snouffer School Road between Sweet Autumn Drive and Centerway Road, while a shared use path is provided along WB Snouffer School Road between Jemal’s Shopping Center (east) driveway and Sweet Autumn Drive. No pedestrian facilities are provided along EB Snouffer School Road between Sweet Autumn Drive and MD 124, nor along WB Snouffer School Road between MD 124 and Route 124 Plaza Shopping Center (east) driveway. Some buffer is provided between the sidewalks/shared use path and the edge of travel lanes for both EB and WB directions. WB sidewalks are buffered by the painted bike lane along WB Snouffer School Road, while EB sidewalks are buffered by the painted bike lane in the EB direction, as well as grass strips and/or bioswales of varying widths throughout the corridor (where sidewalk is present). Moreover, along WB Snouffer School Road, there are wide

entrances/driveways to commercial and industrial developments, interrupting continuity of the sidewalks. Also, there are no marked crosswalks at the entrances and driveways on both sides of Snouffer School Road.

Bicycle facilities are provided in the form of painted bicycle lanes along the outside shoulder of EB and WB Snouffer School Road between Sweet Autumn Drive and Centerway Road.

Ride On bus service is also provided for several bus stops along the corridor, as shown in **Figure 1**.

The Snouffer School Road study corridor includes the following intersections/locations:

- Snouffer School Road at Centerway Road – signalized
- Snouffer School Road at Midblock Crosswalk, 500 feet east of Centerway Road - unsignalized
- Snouffer School Road at Earhart Court/Flower Hill Way– unsignalized
- Snouffer School Road at Bonanza Way – unsignalized (future signal planned for 2026)
- Snouffer School Road at Midblock Crosswalk, 170 feet west of Carriage Walk Drive - unsignalized
- Snouffer School Road at Carriage Walk Drive – unsignalized
- Snouffer School Road at Cherry Laurel Lane/Mooney Drive - signalized
- Snouffer School Road at Sweet Autumn Drive – unsignalized (future signal planned for Summer/Fall 2022)
- Snouffer School Road at MD 124 (Woodfield Road) – signalized



Figure 1: Snouffer School Road Study Corridor

Intersections

Snouffer School Road at Centerway Road

Vehicular Facilities

Snouffer School Road at Centerway Road is a three-legged intersection with a full-color traffic signal. The westbound (WB) Snouffer School Road single left-turn movement has exclusive/permissive signal phasing, while the eastbound (EB) Snouffer School Road and northbound (NB) Centerway Road approaches have permissive signal phasing for U-turns and left turns, respectively.

Pedestrian / Bicyclist / Transit Facilities

Accessible pedestrian signals and countdown pedestrian signals (APS/CPS) are provided for all three approaches. Marked crosswalks are provided across all three approaches. Sidewalk facilities are provided along all approaches, with painted bike lanes and/or grass buffers between the sidewalk and travel lanes. There is a median pedestrian refuge on the west leg of the intersection (for crossing Snouffer School Road). Ride On bus Route 60 services a bus stop along southbound (SB) Centerway Road at this intersection.

Snouffer School Road at Midblock Crosswalk, near Centerway Road

Vehicular Facilities

Snouffer School Road is a four-lane section at this location, with two through lanes in each direction.

Pedestrian / Bicyclist / Transit Facilities

Sidewalk facilities are provided along Snouffer School Road, with painted bike lanes and/or grass buffers between the sidewalk and travel lanes. A marked crosswalk and pedestrian refuge island are provided for crossing Snouffer School Road, along with signing and stop bars instructing vehicles to stop for pedestrians in the crosswalk, though this is not a protected crossing. This midblock crosswalk is located approximately 500 feet east of Centerway Road. Ride On bus Routes 58 and 60 service bus stops at this midblock crosswalk, and there is a bus shelter located at Bus Stop 16063 along WB Snouffer School Road. This location also was observed as a school bus drop off/pick up location.

Snouffer School Road at Earhart Court/Flower Hill Way

Vehicular Facilities

Snouffer School Road at Earhart Court/Flower Hill Way is an unsignalized four-legged intersection, with stop control provided along the NB Flower Hill Way and SB Earhart Court approaches. Dedicated left turn lanes are provided along the Snouffer School Road approaches to facilitate turns into the side streets.

Pedestrian / Bicyclist / Transit Facilities

Sidewalk facilities are provided along Snouffer School Road, with painted bike lanes and/or grass buffers between the sidewalk and travel lanes. Ride On bus Routes 58 and 60 service bus stops at this intersection.

Snouffer School Road at Bonanza Way

Vehicular Facilities

Snouffer School Road at Bonanza Way is an unsignalized four-legged intersection, with stop control provided along the NB and SB Bonanza Way approaches. Dedicated left-turn lanes are provided along the Snouffer School Road approaches to facilitate turns into the side streets.

Pedestrian / Bicyclist / Transit Facilities

Sidewalk facilities are provided along Snouffer School Road, with painted bike lanes and/or grass buffers between the sidewalk and travel lanes. Ride On bus Route 58 services bus stops at this intersection.

Snouffer School Road at Midblock Crosswalk, Near Carriage Walk Drive

Vehicular Facilities

Snouffer School Road is a four-lane section at this location, with two through lanes in each direction.

Pedestrian / Bicyclist / Transit Facilities

Sidewalk facilities are provided along Snouffer School Road, with painted bike lanes and/or grass buffers between the sidewalk and travel lanes. A marked crosswalk and pedestrian refuge island are provided for crossing Snouffer School Road, along with signing and stop bars instructing vehicles to stop for pedestrians in the crosswalk, though this is not a protected crossing. This midblock crosswalk is located approximately 170 feet west of Carriage Walk Drive. Ride On bus Route 58 services bus stops at this midblock crosswalk.

Snouffer School Road at Carriage Walk Drive

Vehicular Facilities

Snouffer School Road at Carriage Walk Drive is a three-legged intersection at this location, with stop control provided along the NB Carriage Walk Drive approach. A two way left turn lane is present along Snouffer School Road to facilitate turns into Carriage Walk Drive and driveways in the vicinity of this intersection.

Pedestrian / Bicyclist / Transit Facilities

Sidewalk facilities are provided along Snouffer School Road, with painted bike lanes and/or grass buffers between the sidewalk and travel lanes.

Snouffer School Road at Cherry Laurel Lane/Mooney Drive

Vehicular Facilities

Snouffer School Road at Cherry Laurel Lane/Mooney Drive is a four-legged intersection with a full-color traffic signal. The NB Cherry Laurel Lane, SB Mooney Drive, and WB Snouffer School Road approaches provide permissive signal phasing for left turn movements with dedicated turn lanes. The EB Snouffer School Road approach provided exclusive/permissive signal phasing for the left turn movement with a dedicated turn lane.

Pedestrian / Bicyclist / Transit Facilities

Accessible pedestrian signals and countdown pedestrian signals (APS/CPS) are provided for all approaches. Marked crosswalks are provided across all approaches. Sidewalk facilities are provided along all approaches, with painted bike lanes and/or grass buffers between the sidewalk and travel lanes. Ride On bus Route 58 services bus stops at this intersection.

Snouffer School Road at Sweet Autumn Drive

Vehicular Facilities

Snouffer School Road at Sweet Autumn Drive is an unsignalized four-legged intersection that is stop-controlled along the Sweet Autumn Drive/Horizon Center Shopping Center Driveway approaches (Sweet Autumn Drive comprises the south leg, while the Horizon Center Shopping Center driveway comprises the north leg). The intersection is scheduled to be upgraded to a full-color traffic signal, which is expected to be operational in the Summer/Fall of 2022.

Pedestrian / Bicyclist / Transit Facilities

Sidewalk facilities are provided along Snouffer School Road, with painted bike lanes and/or grass buffers between the sidewalk and travel lanes. A marked midblock crosswalk and pedestrian refuge island are provided for crossing Snouffer School Road just west of Sweet Autumn Drive, along with signing and stop bars instructing vehicles to stop for pedestrians in the crosswalk (this is not a protected crossing). Ride On bus Route 58 services bus stops at this crosswalk. This existing midblock crosswalk will be removed once the full-color traffic signal at Sweet Autumn Drive is installed. The newly signalized intersection will have marked crosswalks across Snouffer School Road, as well as accessible pedestrian signals and countdown pedestrian signals (APS/CPS) on all approaches.

Snouffer School Road at MD 124 (Woodfield Road)

Vehicular Facilities

Snouffer School Road at MD 124 is a four-legged intersection with a full-color traffic signal. The NB and SB MD 124 approaches have split signal phasing, while the EB Snouffer School Road and WB MD 115 (Muncaster Mill Road) left-turn movements have exclusive/permissive phasing (the WB approach is signed as MD 115/Muncaster Mill Road, which terminates at the MD 124 intersection). The right turn movements for all approaches consist of channelized single right turn lanes operating under yield control.

Pedestrian / Bicyclist / Transit Facilities

Countdown pedestrian signals (CPS) are provided for all approaches, except for crossing each of the channelized right turn lanes, which are not controlled by the traffic signal. No accessible pedestrian signals (APS) are provided at the intersection. Marked crosswalks are provided across all approaches and channelized right turn lanes. Sidewalk facilities are provided along SB MD 124, EB MD 115, and WB MD 115 in the immediate vicinity of the intersection, with grass buffers of varying width. No sidewalk facilities are provided along the Snouffer School Road/west leg of the intersection (though worn paths are present in both the EB and WB directions). Ride On bus stops on the north, south, and east legs service Routes 57, 58, and/or 60.

Figure 2 shows the existing lane use and traffic control at all study intersections within the study corridor.

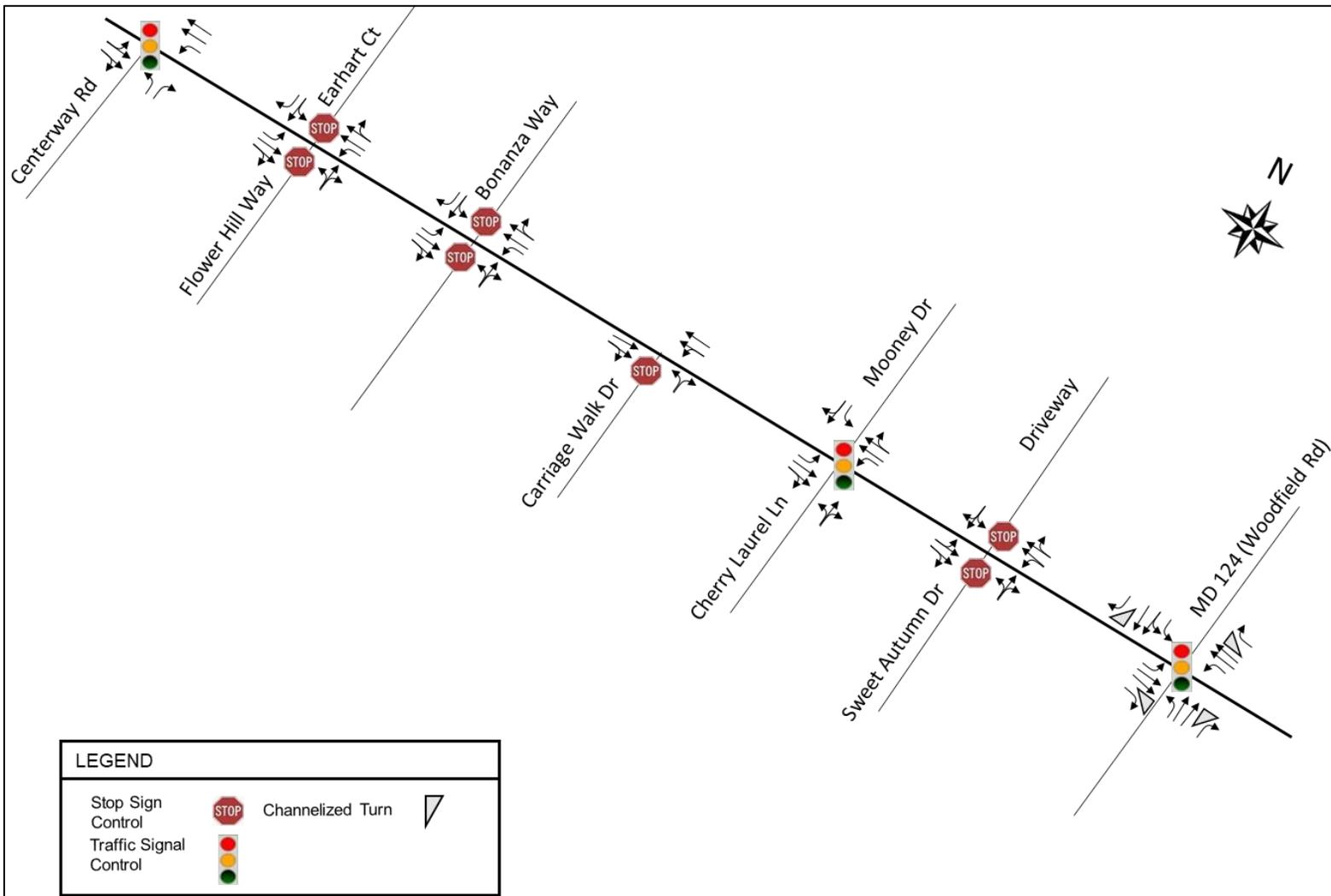


Figure 2: Existing Lane Use and Traffic Control

Pedestrian Level of Comfort

Pedestrian Level of Comfort (PLOC) is a metric used to identify how comfortable it is to walk under various conditions and was used to evaluate the study corridor roadway. The four primary ratings for PLOC are “Undesirable”, “Uncomfortable”, “Somewhat Comfortable”, and “Very Comfortable”. **Figure 3** summarizes the PLOC scores obtained from the Maryland-National Capital Park and Planning Commission’s (M-NCPPC) MCAAtlas online database. It should be noted that recent pedestrian facility upgrades to the Snouffer School Road corridor were completed by MCDOT as part of a long-term planning study, which may result in updates to PLOC scores. The segments of sidewalks and crosswalks that are currently identified with PLOC scores of “Uncomfortable” or “Undesirable”, within the study area, include the following locations:

- Snouffer School Road (EB and WB sidewalks), except for the following segments on the EB side, which are identified as “Somewhat Comfortable”:
 - Between Flower Hill Way and Bonanza Way
 - Between Approximately 125 feet east of Bonanza Way and Mallory Place
 - Between Cherry Laurel Lane and Sweet Autumn Drive
- The crosswalks on the west and south legs of the Snouffer School Road at Centerway Road intersection are identified as “Uncomfortable”.
- The crosswalks on the west, north, and south sides of the Snouffer School Road at Mooney Drive/Cherry Laurel Lane intersection are identified as either “Undesirable” or “Uncomfortable”.
- All crosswalks at the Snouffer School Road/Woodfield Road intersection are identified as either “Undesirable” or “Uncomfortable”.
- The midblock crosswalk just to the west of Sweet Autumn Drive is identified as “Undesirable”.

Sidewalk facilities are missing at the following locations:

- Along Snouffer School Road WB from MD 124 to the Route 124 Plaza Shopping Center Shopping Center (east) Driveway (approximately 370 feet).
- Along Snouffer School Road EB from Sweet Autumn Drive to MD 124 (approximately 750 feet).

Snouffer School Road is currently given a PLOC score of “Undesirable” for most of the study area, with a few segments and crossings identified as “Uncomfortable”. This can be attributed to a combination of factors, including the Average Daily Traffic (ADT) and speed limit of the roadway, as well as a buffer width (as defined by the PLOC scoring criteria) of less than five feet between the sidewalk and travel lanes. While not considered a buffer by the PLOC scoring criteria, painted bike lanes along EB and WB Snouffer School Road between Sweet Autumn Drive and Centerway Road do provide an additional separation of approximately five (5) feet between the sidewalk and the vehicular travel lanes.

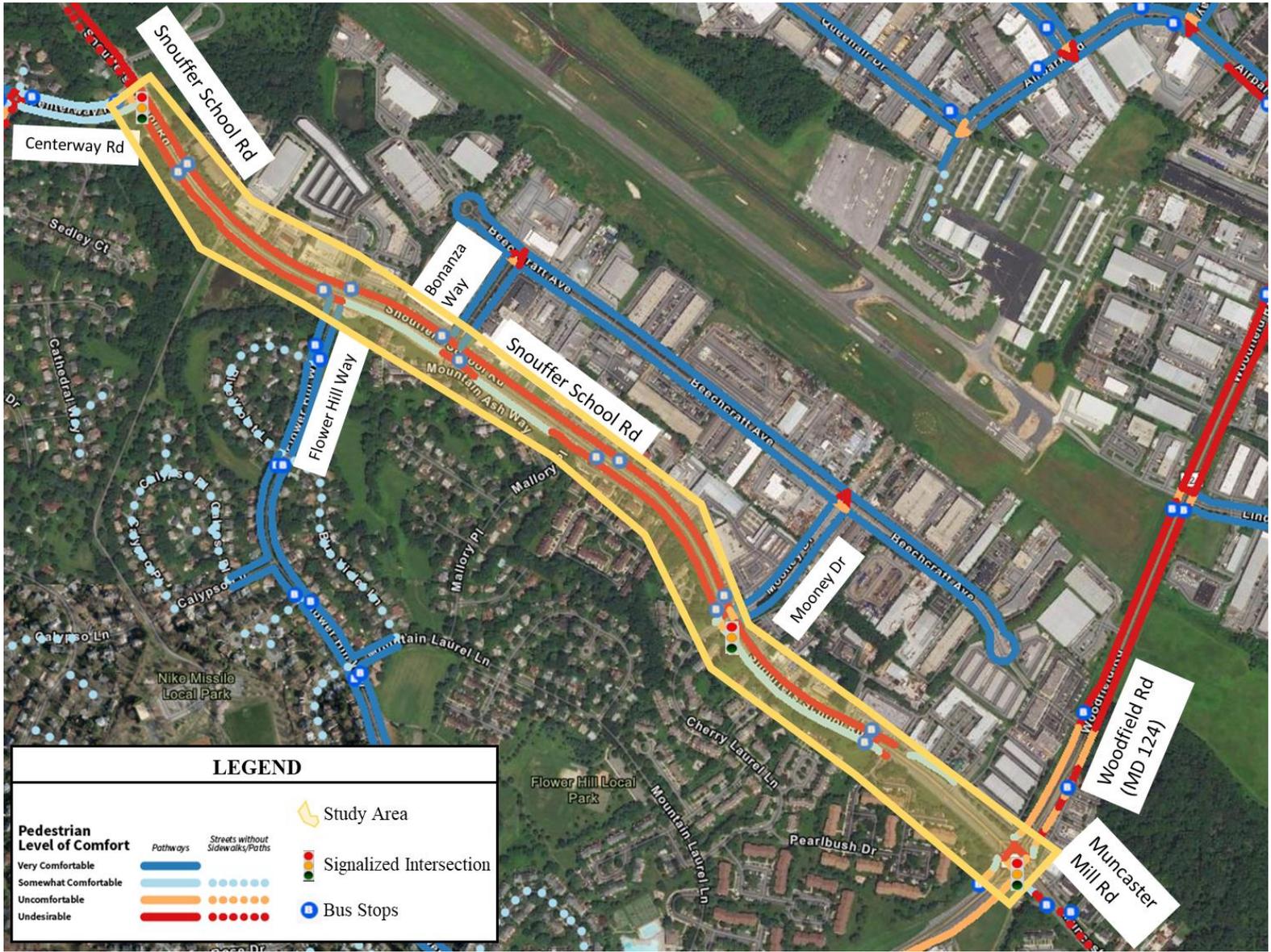


Figure 3: Pedestrian Level of Comfort Map

Traffic Data

MCDOT determined Average Daily Traffic (ADT) volumes for the study area, measured in vehicles per day (vpd), based on available traffic counts from MDOT SHA’s Internet Traffic Monitoring System (iTMS). The counts were collected from Tuesday, October 9, 2018, to Wednesday, October 10, 2018. Additionally, 13-hour (6AM to 7PM) turning movement counts (TMCs) were collected at study intersections and midblock crosswalks on Wednesday, March 16, 2022. Based on the review of the TMCs, AM and PM peak hour turning movement volumes were determined at each intersection and balanced for continuity between the intersections. The ADT and peak hour volume data are shown in **Table 1 and Figure 4**, respectively. Pedestrian and bicycle count data are included in **Figure 5 and Figure 6**, respectively. Full traffic count data is provided in **Appendix A**.

Road	Segment	Count Year	ADT (vpd)
Snouffer School Road	MD 124 to Centerway Road	2018	24,792

Table 1: Snouffer School Road ADT Data

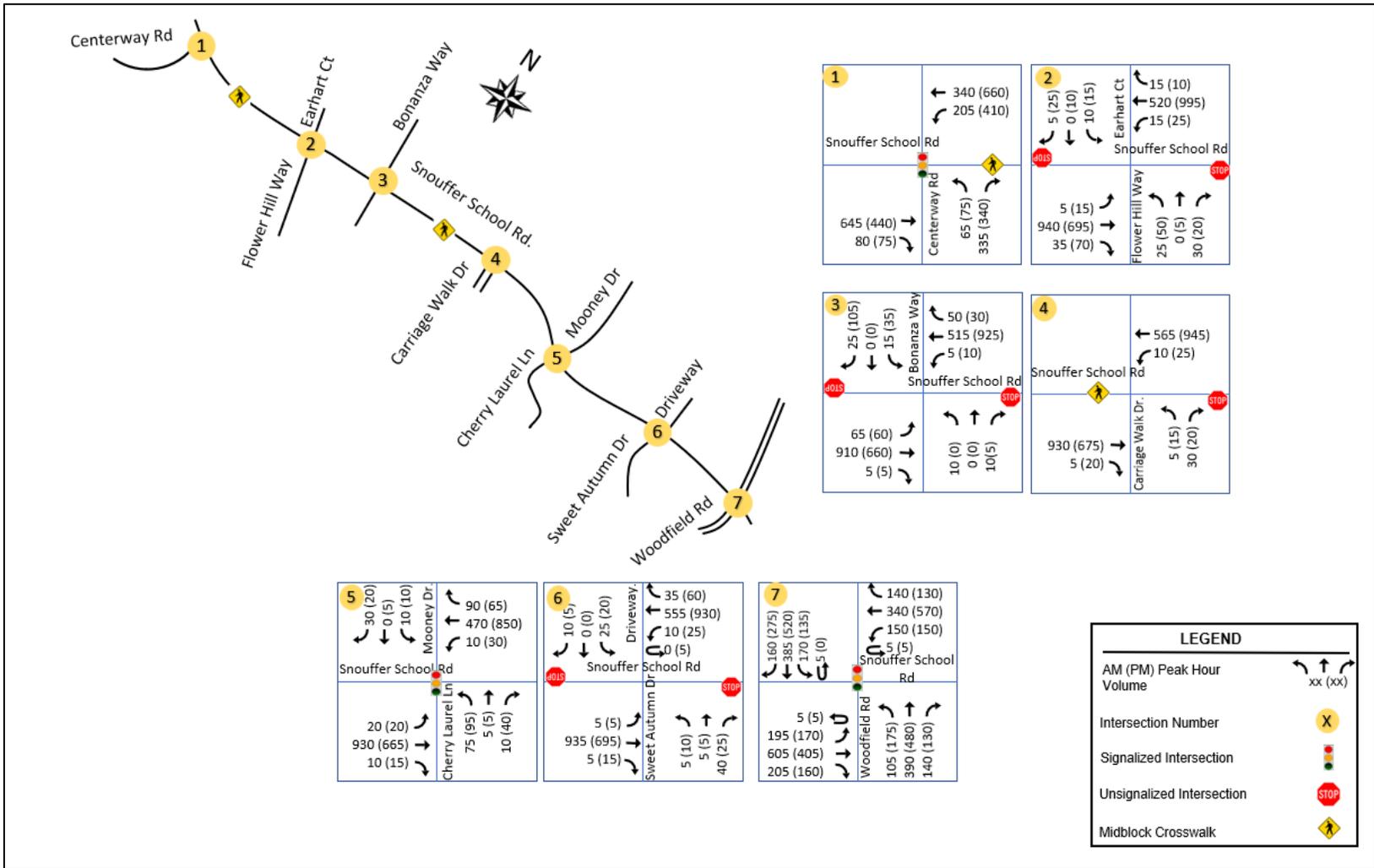


Figure 4: Existing AM and PM Peak Hour Volumes

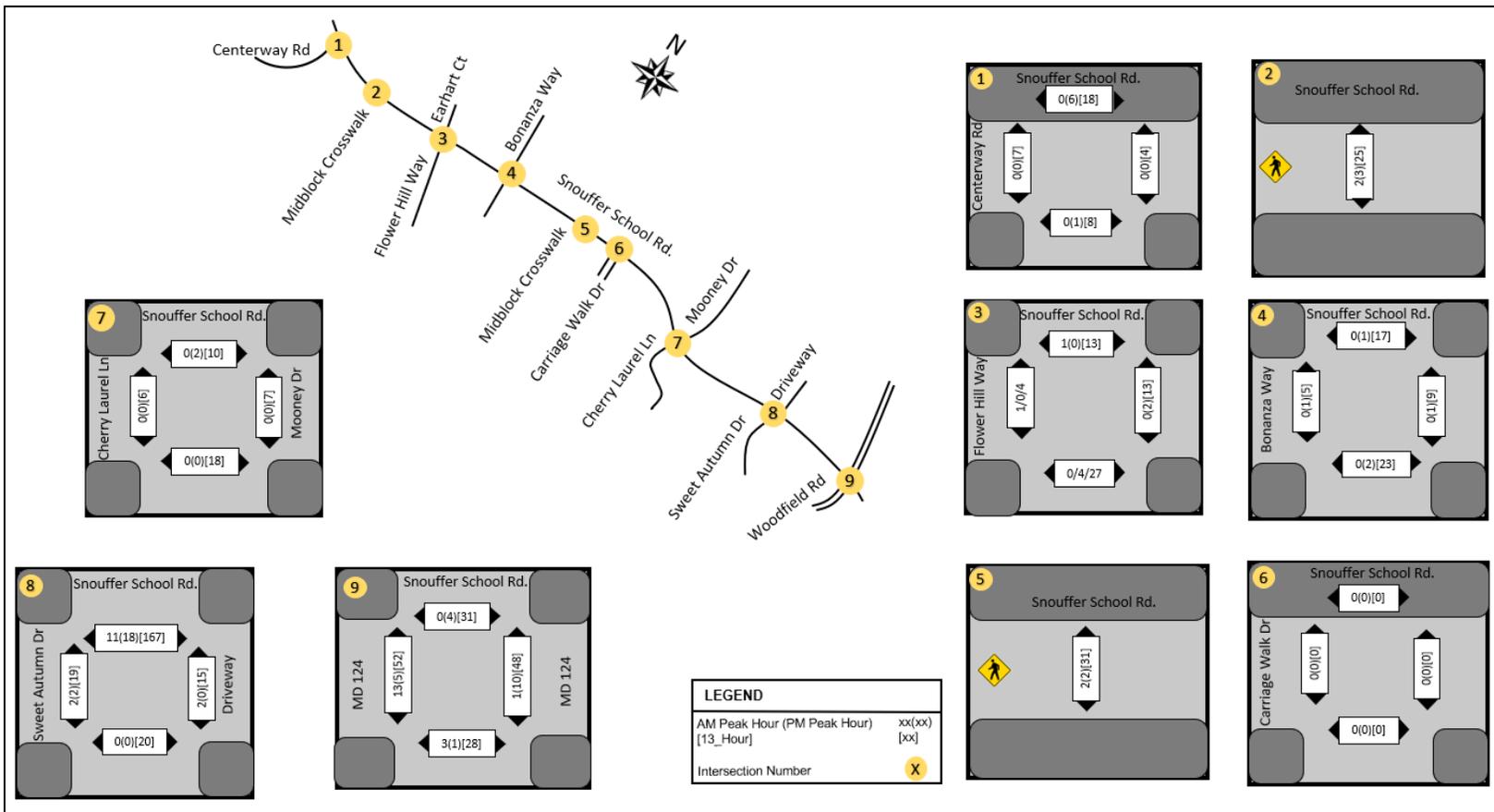


Figure 5: Existing Pedestrian Volumes

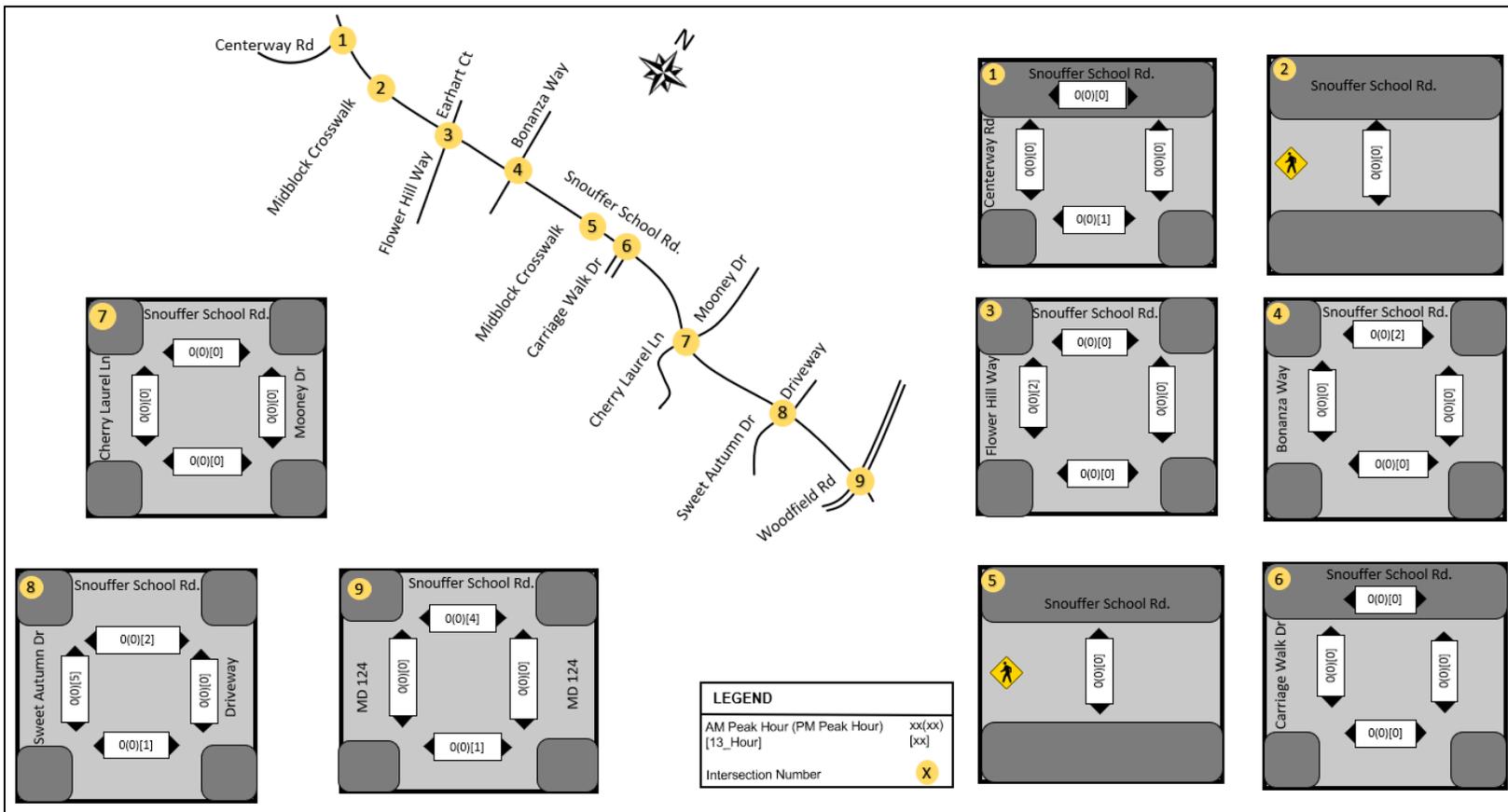


Figure 6: Existing Bicycle Volumes

Speed Data

MCDOT collected speed data over a 48-hour period along Snouffer School Road, between Bonanza Way and Cherry Laurel Lane/Mooney Drive, from Tuesday, March 22, 2022, to Wednesday, March 23, 2022. A summary is provided in **Table 2**. Detailed speed reports can be found in **Appendix B**.

Location	Direction of Travel	Posted Speed (mph)	Average Speed (mph)	85 th Percentile Speed (mph)	12-mph Pace Speed
Snouffer School Rd	EB	40	42	48	36-48 mph
Snouffer School Rd	WB	40	42	48	36-48 mph

Table 2: Snouffer School Road Speed Data

The speed data indicated that some vehicles on Snouffer School Road exceeded the posted speed limit (40 mph) over multiple periods of the day, with approximately 63% to 65% of observed vehicles exceeding 40 mph along WB and EB Snouffer School Road, respectively. 85th percentile vehicle speeds reached eight (8) mph above the posted speed limit.

The speed data summarized above was used to help determine the appropriate speed limit for Snouffer School Road utilizing the Federal Highway Administration’s USLIMITS2 tool, which is a web-based tool used to assist in setting reasonable, safe, and consistent speed limits for specific roadway segments. The USLIMITS2 tool considers roadway characteristics including, but not limited to, AADT, operating speeds, geometric conditions, crash history, presence of on-street parking, and pedestrian and bicycle activity. It should be noted, however, that the speed limit analysis required a summary of injury and non-injury crashes. Since the crash analysis for this study only considered minor injury, serious injury, and fatal crashes, data for all crash types (including injury and property damage only crashes) was obtained for the January 2015 – December 2021 study period. The results of the USLIMITS2 speed limit analysis indicated that the recommended speed limit along Snouffer School Road between Centerway Road and MD 124 is **40 mph** (according to the output from the USLIMITS2 analysis is provided in **Appendix B**). No change to the existing speed limit is recommended at this time.

Public Transit and Ridership

Available public transit within/crossing the study limits includes Montgomery County Ride On bus Routes 57, 58, 60 and 90. Bus Route 58 has bus stops through the entirety of the Snouffer School Road study corridor, while Route 60 has stops between Centerway Road and Flower Hill Way. Routes 57 and 90 have stops on MD 124 and MD 115 at/near their intersection with Snouffer School Road. Bus routes travel between the locations listed below:

- Ride On Route 57 – between Lakeforest Transit Center and Shady Grove Metro Station

- Ride On Route 58 – between Lakeforest Transit Center and Shady Grove Metro Station
- Ride On Route 58 – between Montgomery Village Center and Shady Grove Metro Station
- Ride On Route 58 – between Observation Drive and Shady Grove Metro Station

All bus stops in this segment are marked by Ride On signs with route information provided on each sign. The stops are not consistently located on either the near side or far side of the intersections within the Snouffer School Road corridor. Two of the bus stops along Snouffer School Road are located proximal (within approximately 100 feet) to a signalized crossing. Two other bus stops will also be close to a signalized crossing once the new traffic signal at the Sweet Autumn Drive intersection is activated (expected Summer/Fall 2022). The bus stops that are currently, or will be, close to a signalized intersection and pedestrian crossing are:

- WB Snouffer School Road at Cherry Laurel Lane / Mooney Drive – far side (Ride On Stop ID 26078)
- EB Snouffer School Road at Cherry Laurel Lane / Mooney Drive – near side (Ride On Stop ID 26106)
- WB Snouffer School Road at Sweet Autumn Drive – far side (mid-block) (Ride On Stop ID 26076)
- EB Snouffer School Road at Sweet Autumn Drive – near side (mid-block) (Ride On Stop ID 26108)

Bus stop shelters are provided at the following locations:

- WB Snouffer School Road at Midblock Crosswalk, east of Centerway Road (Ride on Stop ID 16063)
- EB MD 115 (Muncaster Mill Road) at Snouffer School Road/MD 124 – far side (Ride on Stop ID 24396)

Recent average daily bus ridership data, reflecting ridership from October 2021, was provided by MCDOT's Division of Transit Services in March 2022. **Figure 7** shows the locations of all bus stops within the study corridor, the Ride On bus stop ID numbers at each stop, and the daily ridership at each stop (i.e., daily boardings and alightings). A review of the data indicated that daily boardings and alightings varied somewhat throughout the study area, as shown in **Table 3**. The highest total ridership occurs at the bus stop along SB MD 124 at Snouffer School Road/MD 115 (far side; Stop ID 24396).

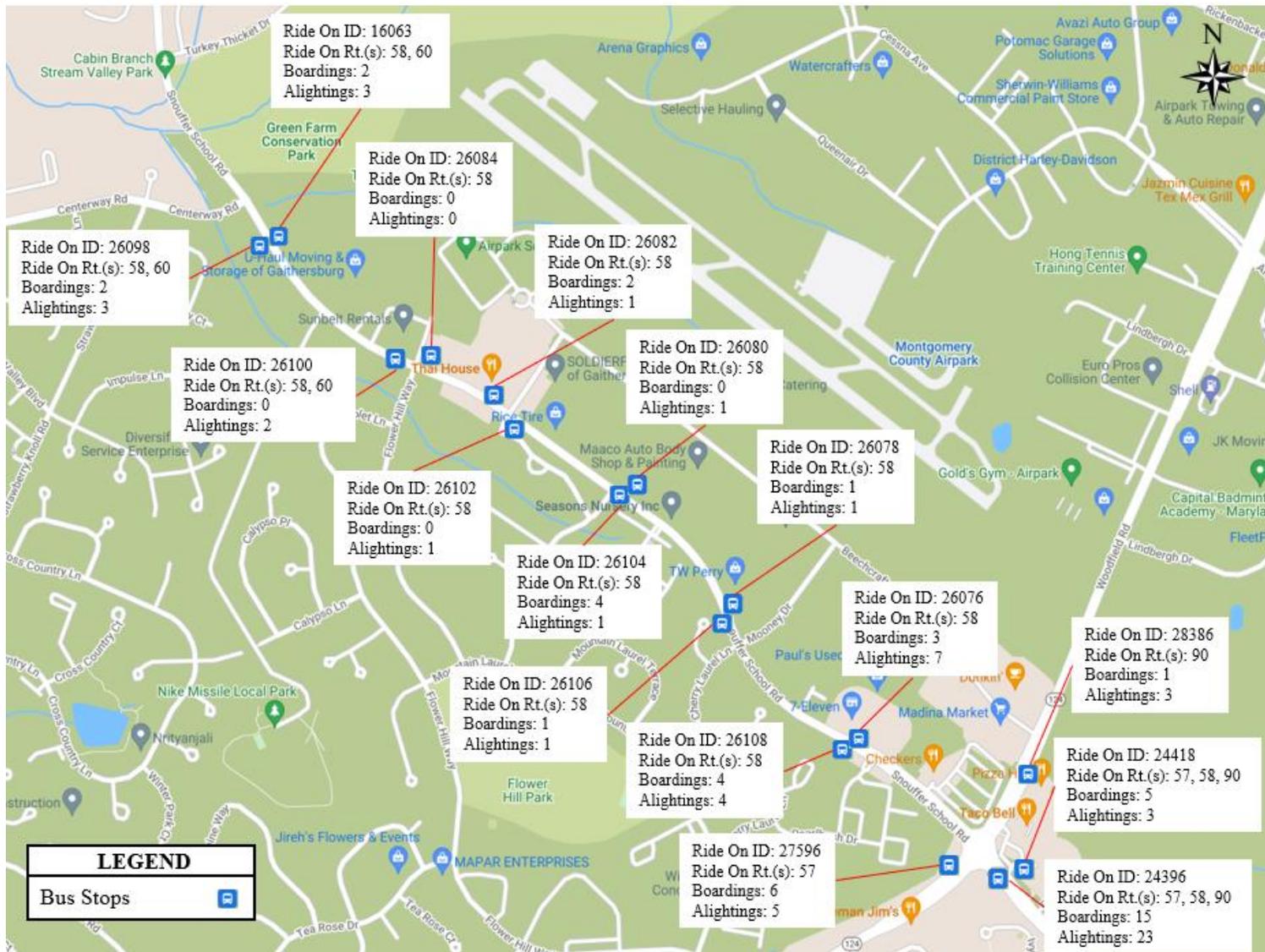


Figure 7: Study Area Bus Stop Locations and Daily Ridership

Location	Stop ID	Bus Route	Boardings	Alight
WB Snouffer School Road and Centerway Road (mid-block)	Ride On:16063	58	2	2
	Ride On:16063	60	-	1
	Total:		2	3
WB Snouffer School Road and Earhart Ct (near side)	Ride On:26084	58	-	-
	Total:		0	0
WB Snouffer School Road and Bonanza Way (far side)	Ride On:26082	58	2	1
	Total:		2	1
WB Snouffer School Road and Mallory Pl (mid- block)	Ride On:26080	58	-	1
	Total:		0	1
WB Snouffer School Road and Mooney Drive (far side)	Ride On:26078	58	1	1
	Total:		1	1
WB Snouffer School Road and Sweet Autumn Drive (mid-block)	Ride On:26076	58	3	7
	Total:		3	7
EB Snouffer School Road and Centerway Road (mid-block)	Ride On:26098	58	1	2
	Ride On:26098	60	1	1
	Total:		2	3
EB Snouffer School Road and Flower Hill Way (near side)	Ride On:26100	58	-	2
	Ride On:26100	60	-	-
	Total:		0	2
EB Snouffer School Road and Bonanza Way (far side)	Ride On:26102	58	-	1
	Total:		0	1
EB Snouffer School Road and Mallory Pl (mid- block)	Ride On:26104	58	4	1
	Total:		4	1
EB Snouffer School Road and Mooney Drive (near side)	Ride On:26106	58	1	1
	Total:		1	1
EB Snouffer School Road and Sweet Autumn Drive (mid-block)	Ride On:26108	58	4	4
	Total:		4	4
EB MD 115 (Muncaster Mill Road) and MD 124 (Woodfield Road) (far side)	Ride On:24396	57	10	15
	Ride On:24396	58	3	5
	Ride On:24396	90	2	3
	Total:		15	23
WB MD 115 (Muncaster Mill Road) and MD 124 (Woodfield Road) (near side)	Ride On:24418	57	-	1
	Ride On:24418	58	4	1
	Ride On:24418	90	1	1
	Total:		5	3
NB Woodfield Road and Muncaster Mill Road (far side)	Ride On:28386	90	1	3
	Total:		1	3
SB Woodfield Road and Muncaster Mill Road (far side)	Ride On:27596	57	6	5
	Total:		6	5

Table 3: Snouffer School Road Bus Stop Daily Ridership

Land Use

The Snouffer School Road study area falls within two land use contexts, as defined in Montgomery County’s 2021 *Complete Streets Design Guidelines*. Land on the north side of Snouffer School Road is considered to be an “Industrial Area” type, while land on the south side is considered to be a “Suburban Area” type. An industrial area, as defined in the *Complete Streets Design Guidelines*, is typically characterized as having medium intensity development (primarily focused around warehousing, light manufacturing, trucking, and equipment repair), possibly small amounts of residential properties and retail, low to moderate levels of pedestrian and bicycle activity, moderate levels of transit service, traditionally wider streets that accommodate high levels of truck traffic, and many existing curb-cuts along the street edge. A suburban area is typically characterized by consolidated areas of single-unit residential development; zoning that includes detached, multi-unit, and townhouse designations; possible isolated retail establishments; medium to low levels of pedestrian and bicyclist activity; medium to low levels of transit service; buildings fronting streets but may be set back, with curb cuts that may exist to access individual addresses; and mostly surface parking.

Other Corridor Studies, Plans, and Redevelopment

MCDOT – Snouffer School Road Sidewalk Connection Study

MCDOT is currently undertaking a sidewalk planning study that seeks to install new sidewalk connections along Snouffer School Road to connect the existing gap in sidewalk between MD 124 and Sweet Autumn Drive/Route 124 Plaza Shopping Center. Current plans are exploring sidewalk connections along both EB and WB Snouffer School Road, with final design and construction expected by late 2022.

Flower Hill Development - Parcel A-9

Flower Hill Development – Parcel A-9 is a proposed 15,659 SF development, consisting of restaurant and retail/service establishment uses, to be located in the southeast (SE) quadrant of the MD 124 (Woodfield Road)/MD 115 (Muncaster Mill Road)/Snouffer School Road intersection. Direct access from MD 124 would be provided via a right in only driveway along NB MD 124 (no access is provided via MD 115). The proposed site is expected to generate approximately 87 and 52 auto trips in the AM and PM peak hours, respectively (with very minimal expected impact to volumes at the MD 124/MD 115/Snouffer School Road intersection). Preliminary Site Plan approval was given for this development by Maryland-National Capital Park and Planning Commission (MNCPPC) on June 28, 2019.

MCDOT – Snouffer School Road New Traffic Signals

MCDOT has programmed two new traffic signals for installation within the Snouffer School Road corridor. One signal, located at the Sweet Autumn Drive intersection, is expected to be functional by Summer/Fall 2022. As part of the Sweet Autumn Drive traffic signal installation, pedestrian crosswalks, accessible pedestrian signals and countdown pedestrian signals (APS/CPS), and pedestrian ramps have been installed on all intersection approaches. Additionally, the existing midblock crosswalk located approximately 50 feet west of Sweet Autumn Drive will be removed. The second signal, located at the Bonanza Way intersection, is programmed for installation in FY 26 (July 2025 - June 2026).

MCDOT – Snouffer School Road Improvements Project (Construction Completed)

In FY 21, MCDOT completed construction of recommendations from its long-term planning study for Snouffer School Road between Sweet Autumn Drive and Centerway Road. This project sought to improve traffic flow and encourage alternative means of mobility through proposed bicycle and pedestrian facilities, to meet traffic and pedestrian demands of existing and future land uses. The project met the recommendations of the area Master Plans. Improvements included implementation of two through lanes in each direction, a continuous center turn/two way left turn lane, five and one half-foot bike lanes in each direction, an eight-foot sidewalk on the north side of Snouffer School Road, and a five-foot sidewalk on the south side.

3. CRASH DATA SUMMARY

The following is a summary of the corridor-wide police-reported crash history from January 1, 2015 through December 31, 2021, for the fatal, serious injury, and minor injury crashes in the Snouffer School Road study corridor. The crash history was acquired through the Montgomery County open data portal. This crash data was reviewed to evaluate patterns and trends to assist in determining appropriate safety recommendations for the corridor. Fifty-seven (57) total applicable crashes were reported during this time period, out of which 46 were minor injury crashes, eight (8) were serious injury crashes and **three (3)** were fatal crashes. While there were additional property damage only crashes, those were not included for the purposes of this study. These crashes were not included due to the Vision Zero goal of focusing on serious injury and fatal crashes, with minor injury crashes serving as a supplementary data source.

Out of 57 total crashes, 37 crashes were listed as intersection or intersection-related crashes. The crash locations are shown in **Figure 8** by type and severity. The crash data is provided in **Appendix C**. The crashes occurred at or in the vicinity of the following locations:

- Snouffer School Road at Centerway Road - **10 crashes**
- Snouffer School Road between Centerway Road and Flower Hill Way/Earhart Court - **three (3) Crashes**
- Snouffer School Road at Flower Hill Way/Earhart Court - **five (5) crashes**
- Snouffer School Road between Flower Hill Way/Earhart Court and Bonanza Way - **three (3) crashes**
- Snouffer School Road between Bonanza Way and Carriage Walk Drive - **two (2) crashes**
- Snouffer School Road at Carriage Walk Drive - **two (2) crashes**
- Snouffer School Road between Carriage Walk Dr and Cherry Laurel Lane Mooney Drive - **two (2) crashes**
- Snouffer School Road at Cherry Laurel Lane/Mooney Drive - **two (2) crashes**
- Snouffer School Road between Cherry Laurel Lane/Mooney Drive and Sweet Autumn Drive - **seven (7) crashes**
- Snouffer School Road at Sweet Autumn Drive - **five (5) crashes**
- Snouffer School Road between Sweet Autumn Drive and MD 124 (Woodfield Road) - **three (3) crashes**
- Snouffer School Road at MD 124 (Woodfield Road) – **13 crashes**

Please note that the locations shown are approximate and may have positions that are slightly altered to display the data more clearly and accurately.

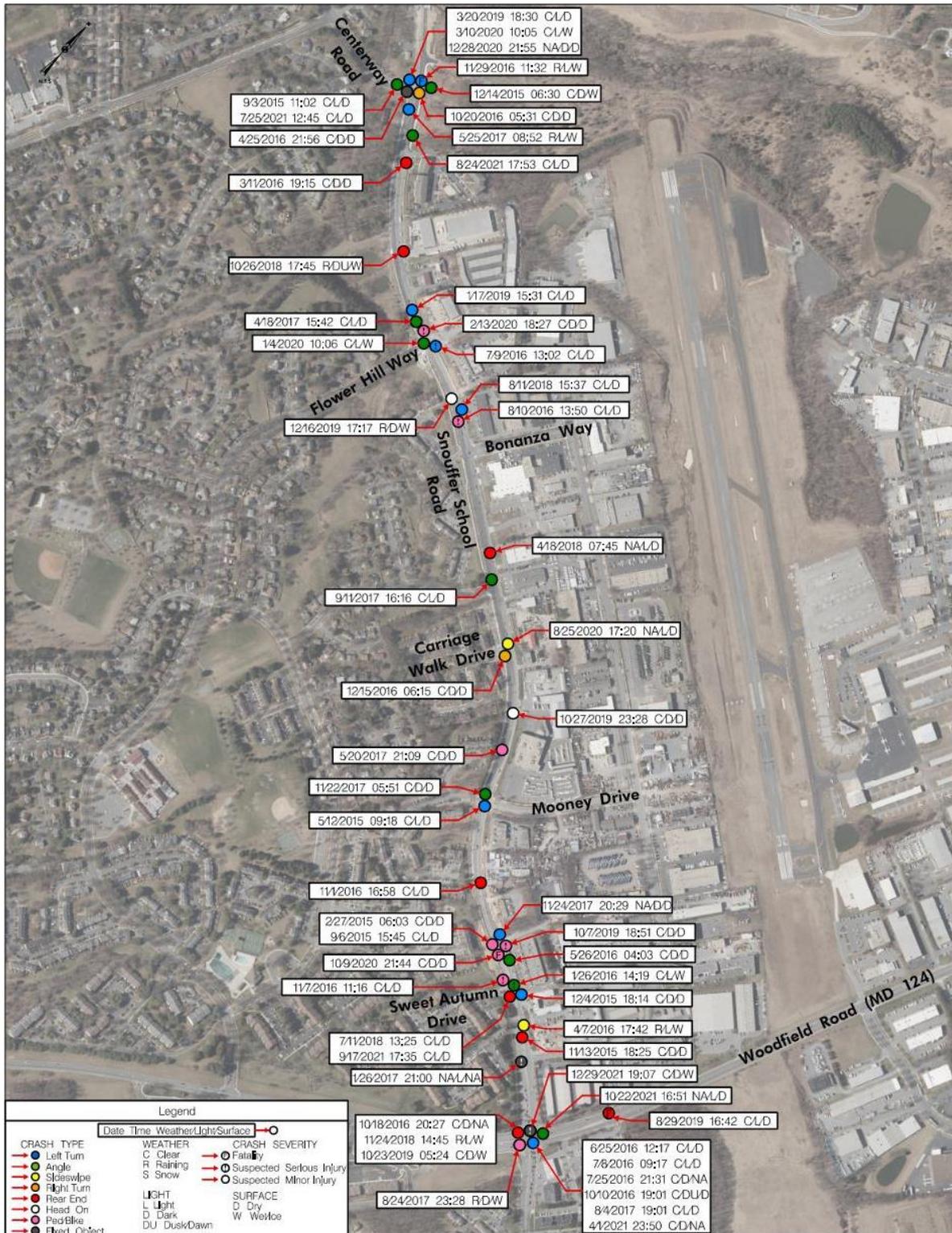


Figure 8: 2015-2021 Crash Locations, Types, and Severities

Crash Severity

Of the 57 total applicable crashes in the study corridor, one (1) fatal, four (4) serious injury, and four (4) minor injury crashes involved a pedestrian or bicyclist. **Figure 9** displays overall crash frequency (the sum of fatal + serious injury + minor injury crashes) by year, and **Figures 10, 11, and 12** show yearly crash frequencies for fatal, serious injury, and minor injury crashes, respectively.

Overall, the number of crashes more than doubled in 2016 for vehicle crashes compared to other study years but has remained relatively consistent for vehicle and pedestrian/bicycle related crashes across all remaining years. It should be noted that MCDOT's Snouffer School Road Improvement Project construction concluded in FY 21 (late 2020), so crash data reported for 2021 is reflective of those improvements being in place.

The first fatal crash occurred at the intersection of Snouffer School Road and Centerway Road in November 2016. A motorist traveling WB on Snouffer School Road was attempting to make a left turn onto Centerway Road and collided with an oncoming motorist traveling along EB Snouffer School Road. The motorist turning left suffered fatal injuries from the crash. The crash occurred during daylight, in the rain, on a wet roadway surface.

The second fatal crash occurred west of Sweet Autumn Drive, near the intersection of Snouffer School Road and the 7-Eleven Driveway (8035 Snouffer School Road), in October 2020. A bicyclist was attempting to diagonally cross the WB lanes of Snouffer School Road from the parking lot of 8035 Snouffer School Road and collided with a motorist traveling WB on Snouffer School Road. The bicyclist suffered fatal injuries from the crash. The crash occurred under dark conditions with no light, under clear weather conditions, and a dry roadway surface. The presence of alcohol was detected on the bicyclist.

The third fatal crash occurred at the intersection of Snouffer School Road and MD 124 (Woodfield Road)/MD 115 (Muncaster Mill Road) in August 2019. A motorist traveling SB on MD 124 (Woodfield Road) collided with another vehicle that was stopped on the SB approach at the traffic signal. The motorist traveling SB suffered fatal injuries from the crash.

The majority of the minor injury crashes occurred during daytime and in clear weather conditions. Four (4) pedestrians were involved in the crashes. Four (4) of the seven (7) serious injury crashes occurred during the day and on dry surfaces. Four (4) serious injury crashes involved pedestrians. Two of the serious injury crashes occurred at the Sweet Autumn Drive intersection.

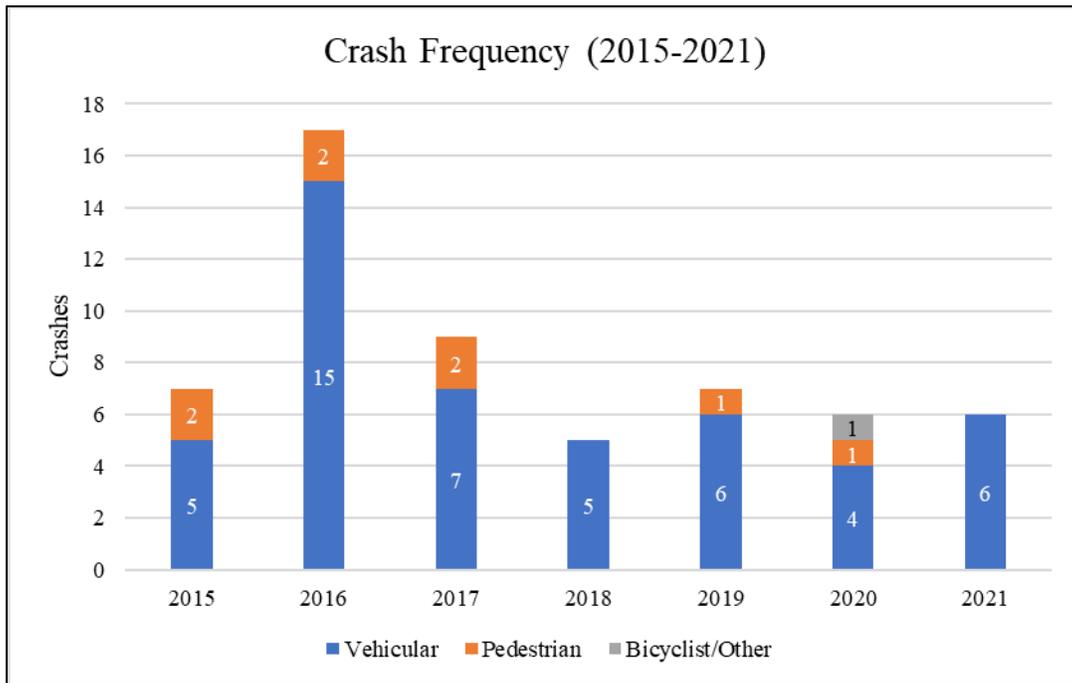


Figure 9: Overall Crash Frequency (Fatal, Serious, and Minor Injury Crashes) by Year (2015-2021)

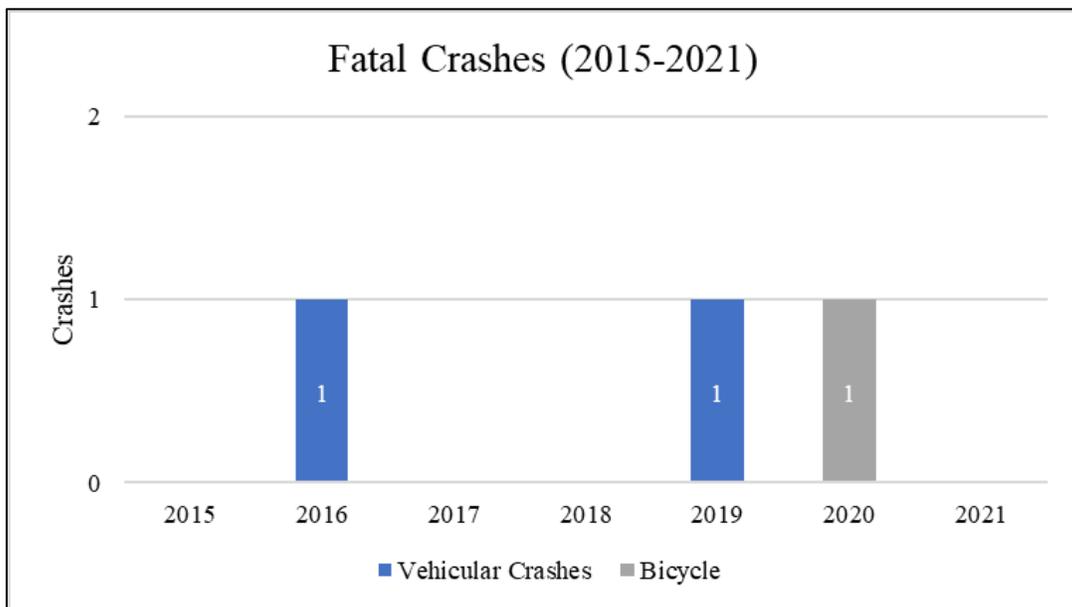


Figure 10: Fatal Crash Frequency by Year (2015-2021)

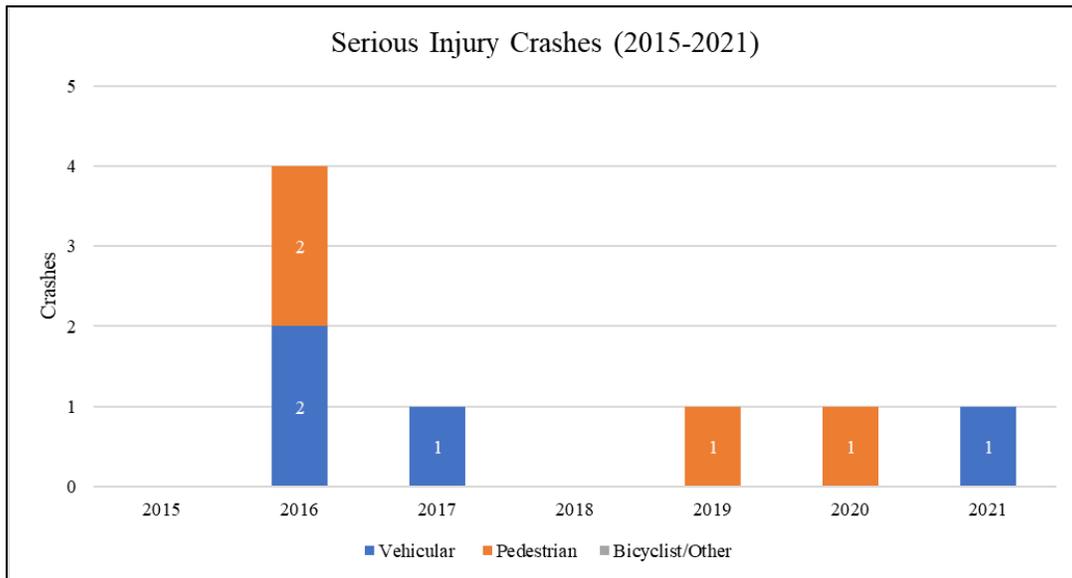


Figure 11: Serious Injury Crash Frequency by Year (2015-2021)

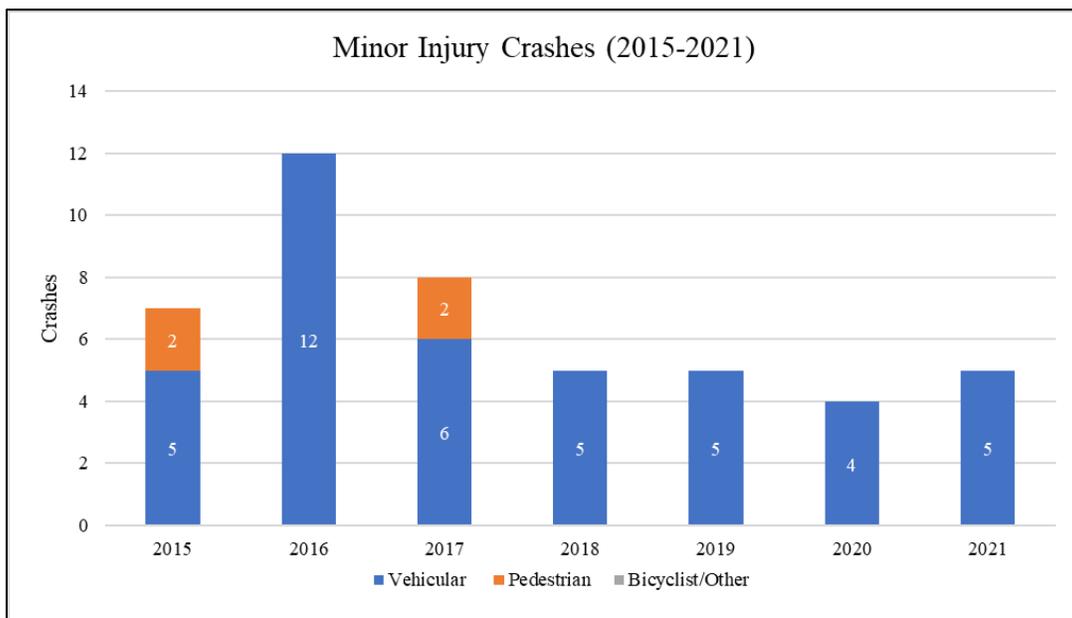


Figure 12: Minor Injury Crash Frequency by Year (2015-2021)

Crash Type

Table 4 presents a summary of crashes by type. The most prominent crash type was left-turn crashes (17 out of 57, or 30%). Five (5) of the 17 left turn crashes occurred at the intersection of Snouffer School Road at Centerway Road, one (1) of which was a fatal crash, and six (6) of the 17 crashes occurred at the intersection of Snouffer School Road at Woodfield Road. The second most prominent crash type was straight movement angle crashes (12 out of 57, or 21%), followed by rear end crashes (11 out of 57, or 19%).

Type of Crash	Total Crashes	Fatal Crashes	Serious Injury Crashes	Minor Injury Crashes
Left Turn (Head-On and Angle)	17 (30%)	1	1	15
Straight Movement Angle	12 (21%)	0	1	11
Single Vehicle	10 (18%)	1	5	4
Rear End	11 (19%)	1	0	10
Sideswipe	2 (4%)	0	0	2
Angle meets Right Turn	2 (4%)	0	0	2
Head On	3 (5%)	0	1	2
Total	57 (100%)	3	8	46

Table 4: Crash Types by Severity (2015-2021)

Crashes by Time of Day

Table 5 summarizes the relationship between vehicular peak hours and injury severity crashes.

Type of Crash	Total Crashes	Fatal Crashes	Serious Injury Crashes	Minor Injury Crashes
Pre-AM Peak (12-6AM)	4 (7%)	0	0	4
AM Peak (6-9AM)	5 (9%)	0	0	5
Midday (9AM – 4PM)	17 (30%)	1	4	12
PM Peak (4-7PM)	16 (28%)	1	2	13
Post-PM Peak (7PM – 12AM)	15 (26%)	1	2	12
Total	57 (100%)	3	8	46

Table 5: Crash Time of Day by Severity (2015-2021)

As shown above, a plurality (17 out of 57, or 30%) of the crashes occurred during the midday (from 9:00 AM to 4:00 PM), followed by the PM peak period (from 4:00 to 7:00 PM) during which 16 crashes (28% of the total crashes) occurred. One fatal crash occurred during midday, another took place in the PM peak, and the final fatal crash occurred in the post-PM peak. Based on the limited number of crashes, it is difficult to draw the conclusion that this is statistically significant.

Crashes by Lighting Condition

Table 6 shows a summary of crashes based on roadway lighting conditions. In total, 53% (30) of the crashes occurred during the daytime hours. Only four (4) crashes were reported to have occurred while it was dark with lights off, though one of the fatal crashes occurred under this condition. Approximately 37% (21) of the total crashes occurred when it was dark with lights on.

Type of Crash	Total Crashes	Fatal Crashes	Serious Injury Crashes	Minor Injury Crashes
Daylight	30 (53%)	2	4	24
Dusk	2 (4%)	0	0	2
Dawn	0 (0%)	0	0	0
Dark (Lights on)	21 (37%)	0	4	17
Dark (Lights off)	4 (7%)	1	0	3
Total	57 (100%)	3	8	46

Table 6: Crash Lighting Condition by Severity (2015-2021)

Crashes by Weather and Surface Conditions

Table 7 shows a summary of weather-related crashes by severity. Based on the crash data, the majority of minor injury crashes (33 out of 57 or 58%) occurred in non-adverse weather conditions, while one fatal crash occurred while it was raining. 11 (19%) of the crashes occurred in cloudy conditions, seven (7) of which

occurred in daylight and four (4) of which occurred at night. Three (3) out of those 11 crashes were serious injury crashes. Adverse weather conditions are not a contributing factor for the majority of the crashes.

Type of Crash	Total Crashes	Fatal Crashes	Serious Injury Crashes	Minor Injury Crashes
Clear	33 (58%)	2	4	27
Cloudy	11 (19%)	0	3	8
Raining	7 (12%)	1	0	6
Wintery Mix	0 (0%)	0	0	0
N/A	6 (11%)	0	1	5
Total	57 (100%)	3	8	46

Table 7: Crashes Weather Conditions by Severity (2015-2021)

The summary of crashes by roadway surface condition is presented in **Figure 13**. Most of the crashes (70%) occurred on dry pavement conditions. Of the twelve (12) crashes that occurred on wet pavement, six (6) occurred in daylight, five (5) at night, and one (1) at dusk. Two (2) fatal crashes occurred under dry surface conditions, and one fatal crash occurred under wet surface conditions.

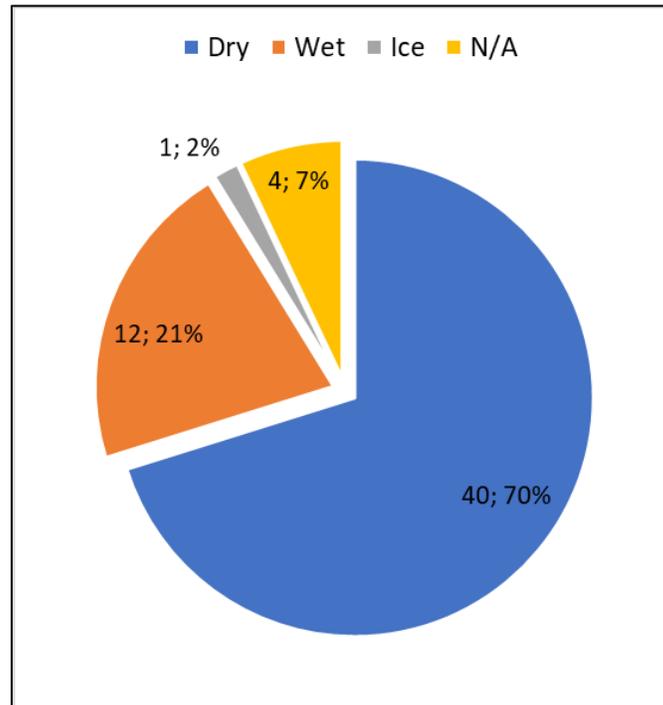


Figure 13: Crashes by Surface Conditions

Pedestrian and Bicyclist Involved Crashes

Table 8 presents the summary of pedestrian and bicyclist involved crashes. There were eight (8) pedestrian related crashes, four (4) of which were serious injury and four (4) of which were minor injury crashes. One (1) serious injury crash each occurred at/near the following locations: at/near the Sweet Autumn Drive intersection, near the 7-Eleven driveway intersection (8035 Snouffer School Road)/mid-block marked crosswalk, near the Thai House restaurant driveway west of Bonanza Way (during a construction period that involved a lane closure on Snouffer School Road), and near Flower Hill Way/Earhart Court. Two (2) minor injury pedestrian crashes occurred near the 7-Eleven driveway intersection (8035 Snouffer School Road)/mid-block marked crosswalk, and one (1) occurred approximately 300 feet west of Mooney Drive.

The one (1) bicyclist crash in the study corridor was a fatal crash, which occurred west of Sweet Autumn Drive, near the intersection of Snouffer School Road and the 7-Eleven Driveway (8035 Snouffer School Road). A bicyclist was attempting to diagonally cross the WB lanes of Snouffer School Road from the parking lot of 8035 Snouffer School Road, when a motorist traveling WB along Snouffer School Road collided with the bicyclist. The bicyclist suffered fatal injuries. The crash occurred under dark conditions with no light, under clear weather conditions, and a dry roadway surface. The bicyclist crossed the roadway outside of a crosswalk, with the presence of alcohol.

Type of Crash	Total Crashes	Fatal Crashes	Serious Injury Crashes	Minor Injury Crashes
Pedestrian Involved	8 (89%)	0	4	4
Bicyclist Involved	1 (11%)	1	0	0
Total	9 (100%)	1	4	4

Table 8: Pedestrian and Bicyclist Involved Crashes by Severity (2015-2021)

4. FIELD REVIEW AND OBSERVATIONS

A field assessment for the study corridor was performed on May 19, 2022. The assessment reviewed pavement conditions and markings, roadway signing, sidewalk conditions, signalization, sight distance (visual review), ADA compliance (visual review), intersection and roadway configurations, and travel behavior by various travel modes. The following section summarizes the field observations, links them to the crash data shown in **Figure 8** where applicable, and identifies potential areas for improvement. **Appendix D** provides photographs of the issues identified in the field review.

Pavement Conditions and Markings

Based on visual inspection, the roadway pavement and pavement markings along the study segment are generally in good condition, except at a few locations. Marked crosswalks are not present across most side streets and driveways along Snouffer School Road.

Pavement markings are faded at the following locations:

- On EB Snouffer School Road, right-turn lane arrow markings are faded at the MD 124 intersection. Also, there are no left-turn lane arrow markings on the EB and WB intersection approaches.
- Lane, arrow, and crosswalk markings at the Snouffer School Road at MD 124 intersection are fading or faded.
- Lane markings along WB Snouffer Road between MD 124 and the east driveway to the Horizon Center Shopping Center are fading or faded.

Additionally, the right-turn channelization islands at the Snouffer School Road/MD 124 intersection have walking surfaces that are worn, have foliage growing out through concrete cracks, and have loose sediment present that may be due to drainage issues. Curb heights on the islands are less than the standard MDOT SHA height of eight (8) inches.

While existing bicycle lane markings are found throughout most of the Snouffer School Road corridor, their visibility at conflict points, such as driveways and intersections, could be enhanced.

Roadway Signing

Based on visual inspection, signs within the study area are generally in good condition. However, proper maintenance must be practiced in spring/summer months to ensure that signs are not obscured by overgrown foliage. The following issues were noted for the signs listed below:

- Along WB Snouffer School Road, the “Stop Here for Pedestrian” sign for the midblock crosswalk to the west of Sweet Autumn Drive has its visibility partially restricted for oncoming traffic by a “Space for Lease” sign.
- The “Begin Center Lane” sign on WB Snouffer School Road at the Airpark Place driveway is vandalized.

- Along EB Snouffer School Road, the “No Right Turn” sign and post at the Flower Hill Way intersection are damaged and need to be replaced.
- Pedestrian warning signs (W11-2) and “Ahead” plaques are not present in advance of any of the midblock crosswalks, in both the EB and WB directions.

Sidewalk Conditions

- Several pedestrian ramps are missing detectable warning surfaces (DWS) or were installed improperly, potentially guiding vision-impaired pedestrians into mainline Snouffer School Road travel lanes where no marked crosswalks are present. These locations include:
 - Snouffer School Road at MD 124 – No DWSs are present on any corners of right turn channelization islands at the intersection.
 - Snouffer School Road at Flower Hill Road/Earhart Court and at Bonanza Way - Large pedestrian ramps and DWSs are installed in the NE and NW corners (of each intersection) that orient pedestrians walking along Snouffer School Road into the mainline travel lanes, rather than across the side streets (across Earhart Court and Bonanza Way).
- Several locations have sidewalks that are spalling.
- The existing sidewalk near bus stop 26102 in the SE quadrant of the intersection of Snouffer School Road at Bonanza Way is higher in elevation than the top of the curb.
- At Snouffer School Road and the Corrigan Square Apartments driveway there is no crosswalk present across the Corrigan Square Apartments driveway. Additionally, the sidewalk ramp and DWS in the NE corner directs pedestrians toward the Snouffer School Road travel lanes, instead of across the driveway.
- Several locations along Snouffer School Road have exceptionally large side street corner radii which causes a longer pedestrian crossing. These locations include:
 - 7-Eleven Driveway entrance, west of Sweet Autumn Drive
 - Mallory Place
 - Earhart Court

Signalization

The Snouffer School Road at MD 124 intersection lacks accessible pedestrian signals (APS) on all approaches and where they are included, has pedestrian pushbutton locations that are not ADA-compliant. Additionally this intersection includes outdated countdown pedestrian signals on all approaches,

All signalized intersections in the corridor have left-turn exclusive/permissive or permissive phasing for EB and WB Snouffer School Road left-turn movements. Each intersection experienced at least one left-turn type

crash within the study period, including one fatal crash (at the Snouffer School Road at Centerway Road intersection).

The pedestrian crossing times were found to be inadequate during field review (compared to MdMUTCD standards), particularly at the Cherry Laurel Drive/Mooney Road intersection and the Centerway Road intersection. Extending the time for pedestrian movements would reduce unnecessary conflicts between pedestrians and vehicles and improve pedestrian safety.

Sight Distance

Based on visual inspection, sight distances appeared to be inadequate at certain intersections within the study area (note that a formal sight distance evaluation was not performed as part of this field review, but areas of concern have been further evaluated using aerial imagery). The following locations are specifically affected:

- Overgrown foliage and a utility pole on the west side of MD 124 at Snouffer School Road/MD 115 partially obscure pedestrians crossing the channelized right turn lane in the NW corner from oncoming SB MD 124 right turning vehicles to WB Snouffer School Road (existing sight distance with the partial obstruction is approximately 150 feet; existing sight distance with no obstruction is approximately 75 feet). A utility pole in the SW corner of the intersection partially obscures pedestrians crossing the channelized right turn lane in the SW corner from oncoming EB Snouffer School Road right turning vehicles to SB MD 124 (existing sight distance with the partial obstruction is approximately 250 feet; existing sight distance with no obstruction is approximately 75 feet). A construction fence in the SE corner of the MD 124 at Snouffer School Road/MD 115 intersection obscures pedestrians crossing the channelized right lane in the SE corner from oncoming NB MD 124 right turning vehicles to EB MD 115 (existing sight distance is approximately 75 feet). There are no advance pedestrian warning signs with supplemental “Across Ramp” plaques for these channelized right turn lane crosswalks, or for the channelized right turn lane crosswalk in the NE corner of the intersection.
- The sight distance for WB Snouffer School Road left turns into Cherry Laurel Drive is limited when there is an opposing EB Snouffer School Road left turning vehicle queuing in the EB left turn lane (sight distance for WB Snouffer School Road left turning vehicles is approximately 125 feet).

Roadway Operations

Driver Behavior

- Vehicle speeds were collected on Snouffer School Road over a 48-hour period from March 22, 2022, through March 23, 2022, and showed that approximately 63% of vehicles exceed the posted speed limit of 40 MPH.
- At the Snouffer School Road at MD 124 intersection, channelized right-turn lanes are present on all four approaches, creating an unprotected conflict point between vehicles and pedestrians. The channelized right- turn lanes enable vehicles to turn at higher travel speeds.

Pedestrian Behavior

- Field review noted that pedestrian sight distance, particularly in the SW corner of the intersection with MD 124, was partially obscured by foliage.

Bicyclist Behavior

- Minimal bicycle activity made it difficult to draw any conclusions about bicycle behavior in the corridor.

5. SUMMARY OF RECOMMENDED IMPROVEMENTS

Based on field observations and available data, several potential improvements were identified by MCDOT that could address the safety issues identified along the Snouffer School Road study corridor. These recommendations are compiled by timeframe (expected time to complete from point of project initiation), including Short-Term (0-6 months), Mid-Term (6-12 months), and Long-Term (12+ months), as well as by relative cost, including low (< \$100K), moderate (\$100K - \$250K) and high (>\$250K). A summary of the recommendations is provided in **Table 9** below.

It should be noted that some potential recommendations from this HIN study required additional operational analysis to determine their feasibility. This operational analysis can be found in **Appendix E** along with additional detail regarding recommendations that were excluded based on operational constraints. Recommendations that are feasible from a traffic operations standpoint have been included in the tables below.

Table 9: Summary of Recommended Improvements

Location 1: Snouffer School Road at Centerway Road - Signalized				
Issue No.	Observation/Issue	Recommendation (Primary Responsible Agency/Secondary Responsible Agency)	Timeframe	Relative Cost
1.1	Five crashes occurred under dark conditions when the lights were on at this intersection. Please see Photo D1.1.1 in Appendix D	Perform a photometric lighting analysis to determine if intersection lighting in the NE and SW corners of the intersection meets acceptable standards. If not, install intersection lighting in the NE and SW corners of the intersection to meet acceptable standards. (MCDOT).	Mid	Moderate
1.2	Pedestrian Clearance Interval is insufficient for the east and west legs of the intersection (crossing Snouffer School Road).	Update pedestrian signal timings to ensure pedestrian clearance intervals are adequate. (MCDOT)	Short	Low
Location 2: Snouffer School Road between Centerway Road and Flower Hill Way/Earhart Court				
Issue No.	Observation/Issue	Recommendation (Primary Responsible Agency/Secondary Responsible Agency)	Timeframe	Relative Cost
2.1	Minor sidewalk spalling was noted along EB Snouffer School Road near Centerway Road. Please see Photo D2.2.1 in Appendix D	Reconstruct sidewalk in the area of concern (MCDOT)	Short to Mid	Moderate
2.2	There is no marked crosswalk across the Corrigan Square Apartments access driveway. Please see Photo D2.2.2 in Appendix D	Install marked continental crosswalk markings across the Corrigan Square Apartments access driveway. (MCDOT)	Short	Low

Location 2: Snouffer School Road between Centerway Road and Flower Hill Way/Earhart Court (Continued)				
Issue No.	Observation/Issue	Recommendation (Primary Responsible Agency/Secondary Responsible Agency)	Timeframe	Relative Cost
2.3	The pedestrian ramps and DWSs at the Corrigan Square Apartments driveway are oriented toward the travel lanes of Snouffer School Road, rather than across the driveway. Please see Photo D2.2.3 in Appendix D	Reconstruct the pedestrian ramps and reinstall DWSs at the Corrigan Square Apartments driveway to orient pedestrians across the driveway, rather than toward Snouffer School Road travel lanes. (MCDOT)	Mid	Low to Moderate
2.4	There is no advance pedestrian warning sign along EB and WB Snouffer School Rd in advance of the mid-block marked crosswalk, east of Centerway Road. Please see Photo D2.2.4 in Appendix D	Install an advance pedestrian warning sign (W11-2) and supplemental "Ahead" plaque along EB and WB Snouffer School Rd, in advance of the mid-block marked crosswalk, east of Centerway Road. (MCDOT)	Short	Low
2.5	Pedestrians crossing at the midblock crosswalk east of Centerway Road are subject to vehicles that travel in excess of the speed limit and are subject to a multilane threat from vehicles. Please see Photo D3.2.5 in Appendix D	Install a Pedestrian Hybrid Beacon (PHB) at the midblock crosswalk east of Centerway Road. (MCDOT)	Long	High
2.6	There is no marked crosswalk across the Nike Missile Park entrance along EB Snouffer School Road. Please see Photo D3.2.6 in Appendix D	Install marked continental crosswalk markings across the Nike Missile Park entrance. (MCDOT)	Short	Low

Location 3: Snouffer School Rd at Flower Hill Rd/Earhart Court - Unsignalized				
Issue No.	Observation/Issue	Recommendation (Primary Responsible Agency/Secondary Responsible Agency)	Timeframe	Relative Cost
3.1	There are no marked crosswalks across the Flower Hill Road or Earhart Court intersection legs. Please see Photo D4.3.1 in Appendix D	Install marked continental crosswalks across the Flower Hill Road and Earhart Court intersection legs. (MCDOT)	Short	Low
3.2	Sidewalk spalling was noted near Earhart Court. Please see Photo D4.3.2 in Appendix D	Reconstruct sidewalk in the area of concern (MCDOT)	Short to Mid	Moderate
3.3	The right turn restriction sign along EB Snouffer School, in advance of Flower Hill Way, is damaged. Please see Photo D4.3.3 in Appendix D	Replace the damaged “No Right Turns 6:30AM – 9:30AM Monday – Friday” (R3-1(Mod)) sign along EB Snouffer School Road, in advance of Flower Hill Way. (MCDOT)	Short	Low
3.4	The pedestrian ramps and DWSs in the NE and NW corners of the intersection (for crossing Earhart Court) are oriented toward the travel lanes of Snouffer School Road, rather than across Earhart Court. Also, the curb radii are large, resulting in a longer crossing distance for pedestrians. Please see Photo D5.3.4 in Appendix D	Reconstruct the pedestrian ramps and reinstall DWSs in the NE and NW corners of the intersection to orient pedestrians across Earhart Court, rather than toward Snouffer School Road travel lanes, as shown in the MCDOT’s Snouffer School Road Improvements Project plans. Reduce the curb radii in the NE and NW corners to reduce the pedestrian crossing distance. (MCDOT)	Mid	Low to Moderate
3.5	The Snouffer School Road at Flower Hill Way/Earhart Court intersection is unsignalized, yet has moderate levels of traffic into and out of Flower Hill Way/Earhart Court, bus stop 26100 and 26084 along EB and WB Snouffer School Road, and there is no protected crossing of Snouffer School Road nearby. Please see Photo D5.3.5 in Appendix D	Install a full traffic signal at Snouffer School Road at Flower Hill Road/Earhart Court. (MCDOT)	Long	High

Location 4: Snouffer School Rd at Bonanza Way - Future Signal				
Issue No.	Observation/Issue	Recommendation (Primary Responsible Agency/Secondary Responsible Agency)	Timeframe	Relative Cost
4.1	There is no marked crosswalk across the Airpark Place Shopping Center Driveway along WB Snouffer School Road. Please see Photo D6.4.1 in Appendix D	Install a marked continental crosswalk across the Airpark Place Shopping Center Driveway along WB Snouffer School Road. (MCDOT)	Short	Low
4.2	The existing sidewalk at bus stop 26102 along EB Snouffer School Road, just east of Bonanza Way, appears to be higher in elevation than the top of the curb. Please see Photo D6.4.2 in Appendix D	Reconstruct the sidewalk along EB Snouffer School Road at bus stop 26102 to provide an eight (8) ft. by five (5) ft. bus pad evenly sloped at 48:1. (MCDOT)	Short	Moderate
4.3	There are no marked crosswalks across the north and south legs of the intersection (crossing Bonanza Way). Please see Photo D6.4.3 in Appendix D	Install marked continental crosswalks on the north and south legs of Bonanza Way (crossing Bonanza Way). (MCDOT)	Short	Low
4.4	The pedestrian ramps and DWSs in the NE and NW corners of the intersection (for crossing Bonanza Way) are oriented toward the travel lanes of Snouffer School Road, rather than across Bonanza Way. Please see Photo D6.4.4 in Appendix D	Reconstruct the pedestrian ramps and reinstall DWSs in the NE and NW corners of the intersection to orient pedestrians across Bonanza Way, rather than toward Snouffer School Road travel lanes as shown in MCDOT's Snouffer School Road Improvements Project plans. (MCDOT)	Mid	Low to Moderate
4.5	Vehicles were observed parking along SB Bonanza Way within the right turn lane, and in areas that are signed as No Parking. Please see Photo D7.4.5 in Appendix D	Remove the No Parking sign along SB Bonanza Way, closest to Snouffer School Road. Install a "No Stopping Anytime" (with left arrow sign) [R7-1(Mod)] along SB Bonanza Way, approximately 75 feet north of the stop bar on the approach to Snouffer School Road. Install a second "No Stopping Anytime" sign (with two-way arrow) along SB Bonanza Way, approximately 25 feet north of the stop bar on the approach to Snouffer School Road. (MCDOT)	Short	Low

Location 5: Snouffer School Rd between Bonanza Way and Carriage Walk Drive				
Issue No.	Observation/Issue	Recommendation (Primary Responsible Agency/Secondary Responsible Agency)	Timeframe	Relative Cost
5.1	Sidewalk spalling was noted along Snouffer School Road, west of Mallory Place. Please see Photo D8.5.1 in Appendix D	Reconstruct sidewalk in the area of concern. (MCDOT)	Short to Mid	Low
5.2	There is no marked crosswalk across the Mallory Place intersection leg along EB Snouffer School Road. Please see Photo D8.5.2 in Appendix D	Install a marked continental crosswalk across the Mallory Place intersection leg along EB Snouffer School Road. (MCDOT)	Short	Low
5.3	The Stop bar is not adjacent to the stop sign at Mallory Place. Please see Photo D8.5.3 in Appendix D	Relocate the stop bar per MdmUTCD standards. (MCDOT)	Short	Low
5.4	In the SE and SW corners Mallory Place, the curb radii are large, resulting in a longer crossing distance for pedestrians. Please see Photo D9.5.4 in Appendix D	Reconstruct the pedestrian ramps and reinstall DWSs in the SE and SW corners of the intersection to orient pedestrians across Mallory Place, rather than toward Snouffer School Road travel lanes. Reduce the curb radii in the SE and SW corners to reduce the pedestrian crossing distance. (MCDOT)	Mid	Low to Moderate
5.5	Pedestrians crossing at the midblock crosswalk west of Carriage Walk Drive are subject to vehicles that travel in excess of the speed limit and are subject to a multilane threat from vehicles. Please see Photo D9.5.5 in Appendix D	Install a Pedestrian Hybrid Beacon (PHB) at the midblock crosswalk west of Carriage Walk Drive. (MCDOT)	Long	High

Location 6: Snouffer School Rd at Carriage Walk Dr - Unsignalized				
Issue No.	Observation/Issue	Recommendation (Primary Responsible Agency/Secondary Responsible Agency)	Timeframe	Relative Cost
6.1	There is no marked crosswalk across the Carriage Walk Drive intersection leg along EB Snouffer School Road. Please see Photo D10.6.1 in Appendix D	Install a marked continental crosswalk across the Carriage Walk Drive intersection leg along EB Snouffer School Road. (MCDOT)	Short	Low
Location 7: Snouffer School Rd between Carriage Walk Drive and Cherry Laurel Ln/Mooney Drive				
Issue No.	Observation/Issue	Recommendation (Primary Responsible Agency/Secondary Responsible Agency)	Timeframe	Relative Cost
7.1	There is no marked crosswalk across the TW Perry Driveway intersection leg along WB Snouffer School Road. Please see Photo D11.7.1 in Appendix D	Install a marked continental crosswalk across the TW Perry Driveway intersection leg along WB Snouffer School Road. (MCDOT)	Short	Low
7.2	There are no DWSs on the pedestrian refuge island on the TW Perry Driveway intersection leg, along WB Snouffer School Road. Please see Photo D11.7.2 in Appendix D	Install two DWSs (minimum 2 feet apart) on the pedestrian refuge island on the TW Perry Driveway intersection leg, along WB Snouffer School Road. Additionally, reconstruct the pedestrian cut-through in the concrete median to better align between the pedestrian ramps on each side of the TW Perry Driveway. (MCDOT)	Short to Mid	Low

Location 8: Snouffer School Rd at Cherry Laurel Ln/Mooney Dr - Signalized				
Issue No.	Observation/Issue	Recommendation (Primary Responsible Agency/Secondary Responsible Agency)	Timeframe	Relative Cost
8.1	There are no intersection lights present in the SW corner of the intersection. Please see Photo D12.8.1 in Appendix D	Perform a photometric lighting analysis to determine if intersection lighting in the SW corner of the intersection meets acceptable standards. If not, install intersection lighting in the SW corner of the intersection to meet acceptable standards. (MCDOT)	Long	Moderate
8.2	Flashing Don't Walk times are insufficient - 12s for crossing Cherry Laurel Lane/Mooney Drive; 16s for crossing Snouffer School Road.	Update pedestrian signal timings to ensure pedestrian clearance intervals are adequate. (MCDOT)	Short	Low
8.3	The WB Snouffer School Road left turn sight distance at Cherry Laurel Lane is limited when there is a vehicle queued in the opposing EB Snouffer School Road left turn lane.	Change the WB Snouffer School Road left-turn phasing from "permissive" to "exclusive" phasing. (MCDOT)	Short to Mid	Low

Location 9: Snouffer School Rd at Sweet Autumn Dr - Future Signal

Issue No.	Observation/Issue	Recommendation (Primary Responsible Agency/Secondary Responsible Agency)	Timeframe	Relative Cost
9.1	<p>There are no streetlights present in the SW corner of the intersection (where a future marked crosswalk for the west leg of the Snouffer School Road/Sweet Autumn Drive signalized intersection will be located). Please see Photo D13.9.1 in Appendix D</p>	<p>Perform a photometric lighting analysis to determine if intersection lighting in the SW corner of the intersection meets acceptable standards. If not, install intersection lighting in the SW corner of the intersection to ensure illumination of the future marked crosswalk for the west leg meets acceptable standards. (MCDOT)</p>	Long	Moderate

Location 10: Snouffer School Rd at MD 124 (Woodfield Rd) - Signalized				
Issue No.	Observation/Issue	Recommendation (Primary Responsible Agency/Secondary Responsible Agency)	Timeframe	Relative Cost
10.1	Sight distance is partially obscured between right turning vehicles and pedestrians crossing the channelized right turn lanes in the NW, SW, and SE corners of the intersection. Please see Photo D14.10.1 in Appendix D	Trim foliage along the SB MD 124 approach to Snouffer School Road to improve sight distance between right turning vehicles and pedestrians crossing the channelized right turn lanes. Additionally, coordinate with the developer of the North Pointe at Flower Hill construction site in the SE quadrant of the intersection to relocate the temporary fence in the SE corner to improve sight distance between NB MD 124 right turning vehicles and pedestrians crossing the right turn channelized lane. (MDOT SHA)	Short	Low
		Install advance pedestrian warning signs (W11-2) and supplemental "Across Ramp" plaques on the NB MD 124, SB MD 124, EB Snouffer School Road, and WB MD 115 approaches to warn motorists of the upcoming pedestrian crosswalks in the channelized right turn lanes. (MDOT SHA)	Short	Low
		Convert the channelized right turn lanes on all intersection approaches to those controlled by a traffic signal with right turn overlap phasing. Tighten the curb radii for all channelized right turns or implement a truck apron for all channelized right turns to slow right turn vehicle speeds. Alternatively, only tighten the curb radii for all channelized right turns or implement truck aprons to slow right turn vehicles speeds. (MDOT SHA)	Long	Moderate to High
10.2	The north leg median on MD 124 extends into the crosswalk (for crossing MD 124). Please see Photo D15.10.2 in Appendix D	Cut back the median nose on the north leg of MD 124 to pull it back outside of the crosswalk (for crossing MD 124). (MDOT SHA)	Short to Mid	Low
10.3	The pedestrian signals in NE and SE corners of the intersection are very dim/difficult to see and are outdated. There are no accessible pedestrian signals (APS) on any approaches. Please see Photo D15.10.3 in Appendix D	Replace the pedestrian signals on all approaches with up-to-date CPS/APS. Reconstruct the right turn channelization islands on all approaches to ensure ADA compliance with respect to ramps, DWSs, and access to pedestrian signal pushbuttons. (MDOT SHA)	Long	Moderate to High
10.4	Existing crosswalk markings are faded and/or are not to standard across all intersection legs. Please see Photo D15.10.4 in Appendix D	Upgrade all intersection crosswalks to continental crosswalk markings. (MDOT SHA)	Short	Low

Location 10: Snouffer School Rd at MD 124 (Woodfield Rd) – Signalized (Continued)				
Issue No.	Observation/Issue	Recommendation (Primary Responsible Agency/Secondary Responsible Agency)	Timeframe	Relative Cost
10.5	Lane and arrow pavement markings are fading or faded on all approaches of the intersection. There are no left turn lane arrow markings on the EB and WB intersection approach turn lanes. Please see Photo D16.10.5 in Appendix D.	Restripe lane and arrow pavement markings along all intersection approaches. Install left turn lane arrow markings in the EB and WB Snouffer School Road/Muncaster Mill Road left turn bays at MD 124, in accordance with MdMUTCD. (MDOT SHA)	Short to Mid	Low to Moderate
10.6	Lane markings along WB Snouffer Road between MD 124 and the east driveway to the Horizon Center Shopping Center are fading or faded. Please see Photo D16.10.6 in Appendix D.	Restripe lane markings along WB Snouffer Road between MD 124 and the east driveway to the Horizon Center Shopping Center. (MCDOT)	Short to Mid	Low to Moderate
10.7	No intersection lighting is present at the intersection, and existing corridor lights do not appear to adequately cover the marked crosswalks in the intersection. Please see Photo D16.10.7 in Appendix D	Perform a photometric lighting analysis to determine if intersection lighting of marked crosswalks meets acceptable standards. If not, install intersection lighting to illuminate all intersection crosswalks to acceptable standards. (MDOT SHA)	Long	Moderate to High

Location 10: Snouffer School Rd at MD 124 (Woodfield Rd) – Signalized (Continued)				
Issue No.	Observation/Issue	Recommendation (Primary Responsible Agency/Secondary Responsible Agency)	Timeframe	Relative Cost
10.8	Sediment, debris, and plant growth is present on all right turn channelization islands in the intersection. Please see Photo D15.10.8 in Appendix D.	Evaluate the drainage condition for all four channelization islands in the intersection. Implement roadway improvements to mitigate the impact of sediment, debris, deposits, and plant growth on the right turn channelization islands where pedestrian ramps and walkways are present. (MDOT SHA)	Long	High
10.9	Pedestrian Clearance Interval is inadequate for crossing the north and south legs of MD 124.	Update pedestrian signal timings to ensure pedestrian clearance intervals are adequate. (MCDOT)	Short	Low
10.10	There is no sidewalk along EB and WB Snouffer School Road between MD 124 and Sweet Autumn Drive.	Install new sidewalk along EB and WB Snouffer School Road to ensure a continuous connection between existing sidewalk at the MD 124 intersection, and the sidewalk/side path at/near Sweet Autumn Drive. Note that MCDOT is currently pursuing a sidewalk connection between these intersections. (MCDOT)	Mid to Long	High

Location 11: Corridorwide				
Issue No.	Observation/Issue	Recommendation (Primary Responsible Agency/Secondary Responsible Agency)	Timeframe	Relative Cost
11.1	The marked bicycle lanes present along EB and WB Snouffer School Road do not have markings that enhance their visibility at conflict points between bicyclists and vehicles.	Install green colored pavement markings for the bicycle lane extensions through driveways and intersections along EB and WB Snouffer School Road, in compliance with Federal Highway Administration’s (FHWA) Interim Approval for Optional Use of Green Colored Pavement for Bike Lanes (IA-14). (MCDOT)	Mid	Low to Moderate

6. TRAFFIC OPERATIONAL ANALYSIS

Capacity and Queuing Analysis

A traffic operational analysis was performed to evaluate the feasibility and impacts of several proposed operational changes listed in the *Summary of Recommended Improvements* section in this HIN report, provided above. Synchro 11 software was used to evaluate Level of Service (LOS) and delay for relevant study intersections in the Snouffer School Road corridor, for both the AM and PM peak hours. Similarly, SimTraffic software was used to obtain 95th percentile queue lengths for relevant study intersections for the AM and PM peak hours. Balanced AM and PM peak hour volumes are shown in **Figure 4**.

For the No-Build condition, Synchro models from MCDOT were used and verified/updated for existing geometry, traffic volumes, traffic control type, and signal timings/phasing. Models were developed for both the existing AM and PM peak hours.

For the Build condition, the existing No-Build Synchro models were modified to incorporate programmed full traffic signals at the Snouffer School Road intersections with Sweet Autumn Drive and Bonanza Way, as well as the following proposed operational changes based on the Snouffer School Road field audit review:

- Snouffer School Road at Centerway Road – change the WB Snouffer School Road left turn phase from exclusive/permissive to exclusive only.
- Snouffer School Road at Cherry Laurel Lane/Mooney Drive – change the WB Snouffer School Road left turn phase from permissive to exclusive only.
- Snouffer School Road at MD 124 (Woodfield Road)/ MD 115 (Muncaster Mill Road)
 - Change the EB Snouffer School Road and WB MD 115 (Muncaster Mill Road) left turn phases from exclusive/permissive to exclusive only.
 - Signalize the yield/free flow channelized rights on all approaches; provide right turn overlap phasing for these right turns.

Traffic signal timings were optimized at all intersections under the Build condition.

Table 10 presents the delay and LOS results comparing the No-Build and Build conditions. Synchro Highway Capacity Manual (HCM) based reports are provided in **Appendix E**.

Node #	Intersection	Approach	Movement	2021 Existing Condition No-Build				2021 Existing Condition Build			
				AM Peak		PM Peak		AM Peak		PM Peak	
				Delay (veh/sec)	LOS	Delay (veh/sec)	LOS	Delay (veh/sec)	LOS	Delay (veh/sec)	LOS
1	Snouffer School Rd & Centerway Rd (Signalized)	Centerway Rd	NBL	34.6	C	34.8	C	32.5	C	34.2	C
			NBR	62.8	E	43.6	D	29.9	C	19.7	B
			NB Overall	58.2	E	42.0	D	30.3	C	22.2	C
		Snouffer School Rd	WBL	8.8	A	13.7	B	49.6	D	47.6	D
			WBT	5.7	A	6.4	A	6.7	A	6.6	A
			WB Overall	6.9	A	9.2	A	22.9	C	22.3	C
		Snouffer School Rd	EBTR	13.2	B	14.0	B	20.2	C	26.3	C
			EB Overall	13.2	B	14.0	B	20.2	C	26.4	C
		Overall Intersection				22.5	C	17.2	B	23.7	C
5	Snouffer School Rd & Cherry Laurel Ln/Mooney Drive (Signalized)	Cherry Laurel Ln	NBLTR	56.5	E	55.9	E	42.2	D	40.0	D
			NB Overall	56.5	E	55.9	E	42.2	D	40.0	D
		Mooney Dr	SBL	48.0	D	43.3	D	36.0	D	32.3	C
			SBTR	49.2	D	43.9	D	37.1	D	32.9	C
			SB Overall	49.0	D	43.8	D	36.9	D	32.8	C
		Snouffer School Rd	WBL	5.2	A	6.8	A	61.9	E	50.6	D
			WBTR	5.9	A	9.3	A	6.2	A	9.5	A
			WB Overall	5.9	A	9.2	A	6.8	A	10.7	B
		Snouffer School Rd	EBL	3.8	A	6.0	A	4.4	A	6.4	A
			EBTR	4.3	A	5.5	A	6.6	A	8.6	A
			EB Overall	4.3	A	5.5	A	6.5	A	8.5	A
		Overall Intersection				9.1	A	12.4	B	9.3	A

Node #	Intersection	Approach	Movement	2021 Existing Condition No-Build				2021 Existing Condition Build			
				AM Peak		PM Peak		AM Peak		PM Peak	
				Delay (veh/sec)	LOS	Delay (veh/sec)	LOS	Delay (veh/sec)	LOS	Delay (veh/sec)	LOS
7	Snouffer School Rd & MD 124/MD 115* (Signalized)	Snouffer School Rd	EBUL	25.4	C	30.8	C	93.4	F	88.8	F
			EBT	37.0	D	35.4	D	37.7	D	45.1	D
			EBR	31.5	C	32.0	C	32.0	C	19.5	B
			EB Overall	33.6	C	33.6	C	47.3	D	49.7	D
		MD 115	WBUL	28.4	C	26.7	C	93.4	F	93.0	F
			WBTR	38.0	D	40.1	D	40.6	D	50.9	D
			WBR	-	-	-	-	19.9	B	22.0	C
			WB Overall	35.7	D	37.7	D	48.6	D	54.1	D
		MD 124	NBL	59.4	E	55.9	E	68.3	E	67.8	E
			NBT	72.0	E	61.0	E	77.4	E	74.1	E
			NBR	55.1	E	49.0	D	47.5	D	44.6	D
			NB Overall	66.3	E	57.9	E	69.4	E	67.9	E
		MD 124	SBL	73.8	E	56.8	E	72.5	E	63.3	E
			SBT	57.3	E	83.3	F	76.2	E	76.6	E
			SBR	47.5	D	53.0	D	43.9	D	44.2	D
			SB Overall	57.9	E	70.9	E	68.3	E	65.3	E
Overall Intersection			47.0	D	50.6	D	57.4	E	59.4	E	

* Delay/LOS Results are reported using HCM 2000 methodology

Table 10: Existing No-Build and Build LOS/Delay Results

A summary of the LOS/delay capacity results comparing the No-Build and Build conditions is presented below:

Snouffer School Road at Centerway Road

- With an “Exclusive” only left turn phase for the WB Snouffer School Road approach, the LOS declines from A to D during the AM peak hour with a 41 sec/veh increase in delay for the left. During the PM peak hour, the LOS declines from B to D with a 33 sec/veh increase in delay for the left.
- Because of signal timing optimization in the Build condition, the LOS for the NB Centerway Road right turns improves from LOS E to C during the AM peak hour and from LOS D to B during the PM peak hour.

Snouffer School Road at Cherry Laurel Lane/Mooney Drive

- With an “Exclusive” only left turn phase assumed for the WB Snouffer School Road approach, the LOS declines from A to E during the AM peak hour with a 57 sec/veh increase in delay for the lefts. During the PM peak hour, the LOS declines from A to D with a 44 sec/veh increase in delay for the lefts.
- Because of signal timing optimization in the Build condition, the LOS for the NB Cherry Laurel Lane approach improves from LOS E to D during the AM peak and PM peak hours.

Snouffer School Road at MD 124 (Woodfield Road)/MD 115 (Muncaster Mill Road)

- With an “Exclusive” only left turn phase for the EB Snouffer School Road and WB MD 115 approaches, the LOS declines from C to F during both the AM peak and PM peak hours with a 60 sec/veh or more increase in delay for the lefts on both approaches.
- With signal timing optimization and a right turn overlap phase for all channelized right turns at the intersection in the Build condition, the NB MD 124 right turn LOS improves from E to D during the AM peak hour.
- Under the Build condition, the overall intersection LOS declines from D to E during both AM and PM peak hours, with an approximately 10 sec/veh increase in delay.

In addition to the capacity analysis, SimTraffic software was used to perform a queuing analysis that focused on left and right turning movements at the study intersections to determine the impact of the proposed operational changes under the Build condition on 95th percentile queues. The results of the queue analysis are presented in **Table 11**. Detailed analysis reports are provided in **Appendix E**.

Intersection	Approach	Movement	2021 Existing Condition: No-Build		2021 Existing Condition: Build		Existing Storage Length (ft)
			95 th Percentile Queue Length (ft)				
			AM Peak	PM Peak	AM Peak	PM Peak	
Snouffer School Rd & Centerway Rd	Snouffer School Rd	WBL	125	200	200	250	160
Snouffer School Rd & Cherry Laurel Ln/Mooney Drive	Snouffer School Rd	WBL	25	50	25	50	225
Snouffer School Rd at MD 124/MD 115	Snouffer School Rd/MD 115	EBL	175	200	325	275	275
		EBR	-*	-*	100	100	625
		WBL	150	150	250	250	375
		WBR	-*	-*	100	150	60
	MD 124	NBR	-*	-*	100	75	475
		SBR	-*	-*	50	100	840

*Under No-Build conditions, right turns at Snouffer School Road and MD 124/MD 115 are not under signal control. Queue lengths are not available.

Table 11: Comparison of 95th Percentile Queue Lengths and Storage Length

Because of the proposed operational changes in the Build condition, several intersection movements are expected to deteriorate (as compared to the No-Build condition) and exceed available queue storage lengths. These movements include the WBL movement on Snouffer School Road at Centerway Road (AM and PM peak hours), the EBL movement on Snouffer School Road at MD 124/MD 115 (AM peak hour), and the WBR movement on MD 115 at MD124/Snouffer School Road (AM and PM peak hours). 95th percentile queue lengths exceed available storage by lengths ranging from approximately 40 feet to 90 feet.

Traffic Operational Analysis Recommendations

Based on the capacity and queuing analysis results for the study intersections in the Snouffer School Road corridor under No-Build and Build conditions, the following proposed operational changes were retained in the *Summary of Recommended Improvements* tables above:

- Snouffer School Road at Cherry Laurel Lane/Mooney Drive – change the WB Snouffer School Road left turn phase from permissive to exclusive only.
 - This operational change was retained since the LOS and delay did not degrade to F, and 95th percentile queues are expected to be accommodated by the available left turn storage length.
- Snouffer School Road at MD 124 (Woodfield Road)/ MD 115 (Muncaster Mill Road) – Signalize the yield/free flow channelized rights on all approaches; provide right turn overlap phasing for these right turns.
 - This operational change was retained since LOS and delays were not expected to significantly degrade between the No-Build and Build conditions, and the 95th percentile queue lengths

were expected to be less than the available storage length for these right turn movements, with the exception of the WB MD 115 right turn. However, since the WB channelized right lane has only about 60 feet of storage, it is likely that the adjacent WB through lane on MD 115 will frequently block access to the channelized right (as is does under No-Build conditions). In addition, the WB through green phase would always overlap with the WB right green phase, limiting the possibility that rights would frequently block throughs when throughs were given a green phase.

The following proposed operational changes were NOT retained:

- Snouffer School Road at Centerway Road – change the WB Snouffer School Road left turn phase from exclusive/permmissive to exclusive only.
 - This operational change was not retained due to 95th percentile queues that are expected to exceed available storage for the WBL along Snouffer School Road. Queues that exceed available storage and block adjacent lanes can present a safety issue, as vehicles in an adjacent lane may not expect such a blockage, and/or may need to perform a sudden maneuver in an attempt to avoid a crash.
- Snouffer School Road at MD 124 (Woodfield Road)/ MD 115 (Muncaster Mill Road) – Change the EB Snouffer School Road and WB MD 115 (Muncaster Mill Road) left turn phases from exclusive/permmissive to exclusive only.
 - This operational change was not retained due to the significant degradation in LOS and delay for both EB and WB left turn movements (LOS degraded from C under No Build to F under Build conditions), as well as 95th percentile queues that are expected to exceed available storage for the EBL along Snouffer School Road. Queues that exceed available storage and block adjacent through lanes can present a safety issue, as vehicles in an adjacent lane may not expect such a blockage, and/or may need to perform a sudden maneuver in an attempt to avoid a crash.

APPENDIX

A

Traffic Count Materials

Turning Movement Counts - Field Sheet

Job No.: 17-01-44

Location: SNOUFFER SCHOOL ROAD @ CENTERWAY ROAD
 Date: 3/18/2022 Wednesday
 Recorder: CSS
 Interval (dd) : 15
 (In Minutes)

County: MONTGOMERY
 Town: GAITHERSBURG
 Weather: CLEAR

PEAK HOURS	AM PERIOD 6:00AM-12:00PM	Start 07:45	End 08:45	Volume 1419	LOS	V/C	PM PERIOD 12:00PM-7:00PM	Start 16:45	End 17:45	Volume 1858	LOS	V/C

Street Name--> HOUR ENDING	CENTERWAY RD					CENTERWAY RD					SNOUFFER SCHOOL ROAD					SNOUFFER SCHOOL ROAD				
	U turn	From North			Total	U turn	From South			Total	U turn	From East			Total	U turn	From West			Total
		Left	Through	Right			Through	Right	Through			Right	Through	Right			Through	Right		
00:15					0					0					0					0
00:30					0					0					0					0
00:45					0					0					0					0
01:00					0					0					0					0
01:15					0					0					0					0
01:30					0					0					0					0
01:45					0					0					0					0
02:00					0					0					0					0
02:15					0					0					0					0
02:30					0					0					0					0
02:45					0					0					0					0
03:00					0					0					0					0
03:15					0					0					0					0
03:30					0					0					0					0
03:45					0					0					0					0
04:00					0					0					0					0
04:15					0					0					0					0
04:30					0					0					0					0
04:45					0					0					0					0
05:00					0					0					0					0
05:15					0					0					0					0
05:30					0					0					0					0
05:45					0					0					0					0
06:00					0					0					0					0
06:15	0	0	0	0	0	0	9	0	42	51	0	17	43	0	60	0	0	75	3	78
06:30	0	0	0	0	0	0	14	0	65	79	0	17	54	0	71	0	0	71	6	77
06:45	0	0	0	0	0	0	8	0	49	57	0	17	42	0	59	0	0	90	7	97
07:00	0	0	0	0	0	0	14	0	65	79	0	25	42	0	67	0	0	107	5	112
07:15	0	0	0	0	0	0	9	0	60	69	0	23	47	0	70	0	0	131	11	142
07:30	0	0	0	0	0	0	14	0	53	67	0	29	50	0	79	0	0	123	19	142
07:45	0	0	0	0	0	0	16	0	82	98	0	35	67	0	86	0	0	151	8	159
08:00	0	0	0	0	0	0	19	0	82	101	0	40	87	0	107	0	0	147	16	163
08:15	0	0	0	0	0	0	10	0	62	72	0	47	75	0	122	0	0	127	24	151
08:30	0	0	0	0	0	0	22	0	61	83	0	33	61	0	94	0	0	139	22	161
08:45	0	0	0	0	0	0	14	0	82	96	0	45	69	0	114	0	0	139	16	155
09:00	0	0	0	0	0	0	23	0	82	105	0	57	64	0	121	0	0	122	23	145
09:15	0	0	0	0	0	0	17	0	52	69	0	45	57	0	102	0	0	107	13	120
09:30	0	0	0	0	0	0	1	0	65	66	0	32	64	0	96	0	0	91	7	98
09:45	0	0	0	0	0	0	5	0	76	81	0	34	51	0	85	0	0	64	7	71
10:00	0	0	0	0	0	0	6	0	46	52	0	30	52	0	82	0	0	61	11	72
10:15	0	0	0	0	0	0	7	0	53	60	0	35	63	0	98	0	0	64	10	74
10:30	0	0	0	0	0	0	12	0	45	58	0	33	48	0	81	0	0	51	9	60
10:45	0	0	0	0	0	0	14	0	47	61	0	34	39	0	73	0	0	66	7	73
11:00	0	0	0	0	0	0	8	0	39	47	0	34	66	0	100	0	0	53	12	65
11:15	0	0	0	0	0	0	11	0	48	59	0	39	48	0	87	0	0	68	18	86
11:30	0	0	0	0	0	0	11	0	40	51	0	44	51	0	95	0	0	51	5	56
11:45	0	0	0	0	0	0	10	0	57	67	0	39	62	0	101	0	0	66	9	75
12:00	0	0	0	0	0	0	10	0	45	55	0	49	54	0	103	0	0	58	12	70
12:15	0	0	0	0	0	0	10	0	55	65	0	46	70	0	116	0	0	66	8	74
12:30	0	0	0	0	0	0	13	0	54	67	0	45	75	0	120	0	0	69	16	85
12:45	0	0	0	0	0	0	13	0	59	72	0	50	89	0	139	0	0	66	16	82
13:00	0	0	0	0	0	0	13	0	49	62	0	54	78	0	132	0	0	59	13	72
13:15	0	0	0	0	0	0	13	0	48	61	0	63	87	0	150	0	0	61	13	74
13:30	0	0	0	0	0	0	16	0	60	76	0	48	81	0	129	0	0	57	13	70
13:45	0	0	0	0	0	0	15	0	47	62	0	60	78	0	138	0	0	72	12	84
14:00	0	0	0	0	0	0	14	0	45	59	0	48	93	0	141	0	0	65	12	77
14:15	0	0	0	0	0	0	10	0	43	53	0	55	79	0	134	0	0	72	17	89
14:30	0	0	0	0	0	0	12	0	43	55	0	55	100	0	155	0	0	71	9	80
14:45	0	0	0	0	0	0	7	0	57	64	0	61	100	0	161	0	0	91	12	103
15:00	0	0	0	0	0	0	11	0	62	73	0	59	103	0	162	0	0	78	20	98
15:15	0	0	0	0	0	0	13	0	68	81	0	82	118	0	200	0	0	74	10	84
15:30	0	0	0	0	0	0	17	0	53	70	0	86	115	0	201	0	0	98	18	116
15:45	0	0	0	0	0	0	22	0	65	87	0	75	129	0	204	0	0	100	25	125
16:00	0	0	0	0	0	0	23	0	59	82	0	83	117	0	200	0	0	87	12	99
16:15	0	0	0	0	0	0	16	0	66	82	0	86	145	0	231	0	0	55	21	76
16:30	0	0	0	0	0	0	11	0	57	68	0	99	145	0	244	0	0	113	17	130
16:45	0	0	0	0	0	0	17	0	67	84	0	85	144	0	229	0	0	75	13	88
17:00	0	0	0	0	0	0	25	0	77	102	0	80	140	0	220	0	0	111	11	122
17:15	0	0	0	0	0	0	22	0	66	88	0	113	170	0	283	0	0	76	12	88
17:30	0	0	0	0	0	0	15	0	92	107	0	108	149	0	257	0	0	114	33	147
17:45	0	0	0	0	0	0	17	0	61	78	0	92	172	0	264	0	0	83	19	102
18:00	0	0	0	0	0	0	18	0	59	77	0	90	137	0	227	0	0	94	18	112
18:15	0	0	0	0	0	0	19	0	84	103	0	96	144	0	240	0	0	69	20	89
18:30	0	0	0	0	0	0	13	0	78	91	0	91	109	0	200	0	0	86	18	104
18:45	0	0	0	0	0	0	24	0	66	90	0	94	122	0	216	0	0	56	14	70
19:00	0	0	0	0	0	0	11	0	63	74	0	74	117	0	191	0	0	72	26	98
19:15					0					0					0					0
19:30					0					0					0					0
19:45					0					0					0					0
20:00					0					0					0					0
20:15					0					0					0					0
20:30					0					0					0					0
20:45					0					0					0					0
21:00					0					0					0					0
21:15					0					0					0					0
21:30					0					0					0					0
21:45					0					0					0					0
22:00					0					0					0					0
22:15					0					0					0					0
22:30					0					0					0					0
22:45					0					0										

Turning Movement Counts - Field Sheet

Job No.: 17-01-44

Location: SNOUFFER SCHOOL ROAD @ CENTERWAY ROAD
 Date: 3/18/2022 Wednesday
 Recorder: CSS
 Interval (dd): 15

County: MONTGOMERY
 Town: GAITHERSBURG
 Weather: CLEAR

SCHOOL CHILDREN, PEDESTRIANS & BICYCLES

Hour	From North CENTERWAY RD		From South CENTERWAY RD		From East SNOUFFER SCHOOL ROAD		From West SNOUFFER SCHOOL ROAD	
	Pedestrians	Bicycles	Pedestrians	Bicycles	Pedestrians	Bicycles	Pedestrians	Bicycles
00:15								
00:30								
00:45								
01:00								
01:15								
01:30								
01:45								
02:00								
02:15								
02:30								
02:45								
03:00								
03:15								
03:30								
03:45								
04:00								
04:15								
04:30								
04:45								
05:00								
05:15								
05:30								
05:45								
06:00								
06:15	0	0	0	0	0	0	0	0
06:30	0	0	0	0	0	0	0	0
06:45	0	0	0	0	0	0	0	0
07:00	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	2	0
08:00	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0
09:45	0	0	1	0	0	0	1	0
10:00	0	0	0	0	0	0	1	0
10:15	0	0	1	0	0	0	0	0
10:30	1	0	0	0	0	0	0	0
10:45	0	0	0	0	1	0	1	0
11:00	1	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	1	0
11:30	1	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	0
12:00	1	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0
12:30	0	0	1	0	1	0	0	0
12:45	1	0	0	0	0	0	0	0
13:00	0	0	0	0	0	0	0	0
13:15	0	0	0	0	0	0	0	0
13:30	0	0	1	0	0	0	1	0
13:45	0	0	0	0	0	0	1	0
14:00	2	0	0	1	0	0	0	0
14:15	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0
15:00	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	0
15:30	0	0	3	0	0	0	0	0
15:45	0	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0
17:00	2	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0
17:30	0	0	1	0	0	0	0	0
17:45	4	0	0	0	0	0	0	0
18:00	1	0	0	0	0	0	0	0
18:15	2	0	0	0	0	0	0	0
18:30	1	0	0	0	1	0	0	0
18:45	0	0	0	0	0	0	0	0
19:00	1	0	0	0	1	0	0	0
19:15								
19:30								
19:45								
20:00								
20:15								
20:30								
20:45								
21:00								
21:15								
21:30								
21:45								
22:00								
22:15								
22:30								
22:45								
23:00								
23:15								
23:30								
23:45								
00:00								
TOTAL	0	18	0	8	1	0	4	0
AM Peak Vol	0	0	0	0	0	0	0	0
PM Peak Vol	0	6	0	1	0	0	0	0

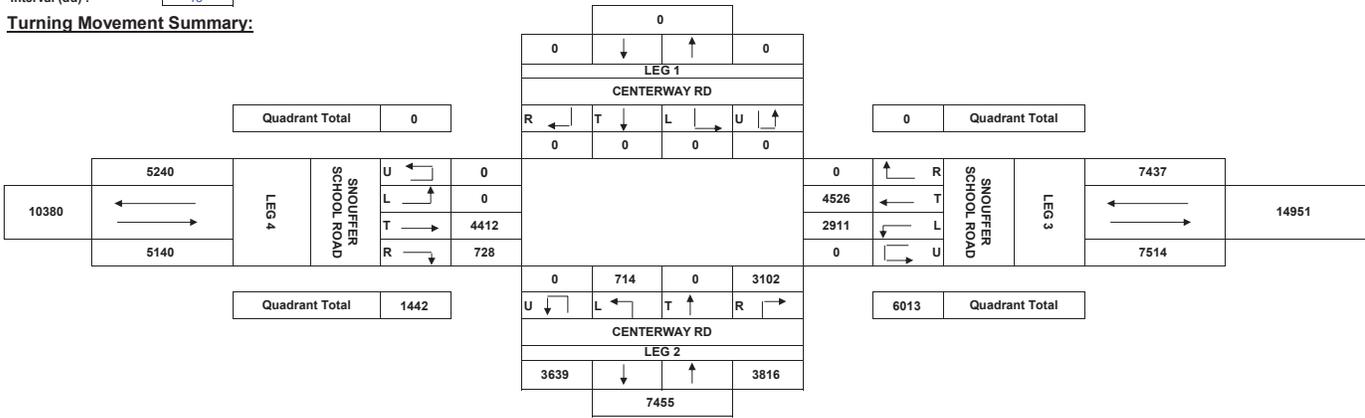
Turning Movement Counts - Field Sheet

Job No.: 17-01-44

Location: SNOUFFER SCHOOL ROAD @ CENTERWAY ROAD
 Date: 3/18/2022 Wednesday
 Recorder: CSS
 Interval (dd): 15

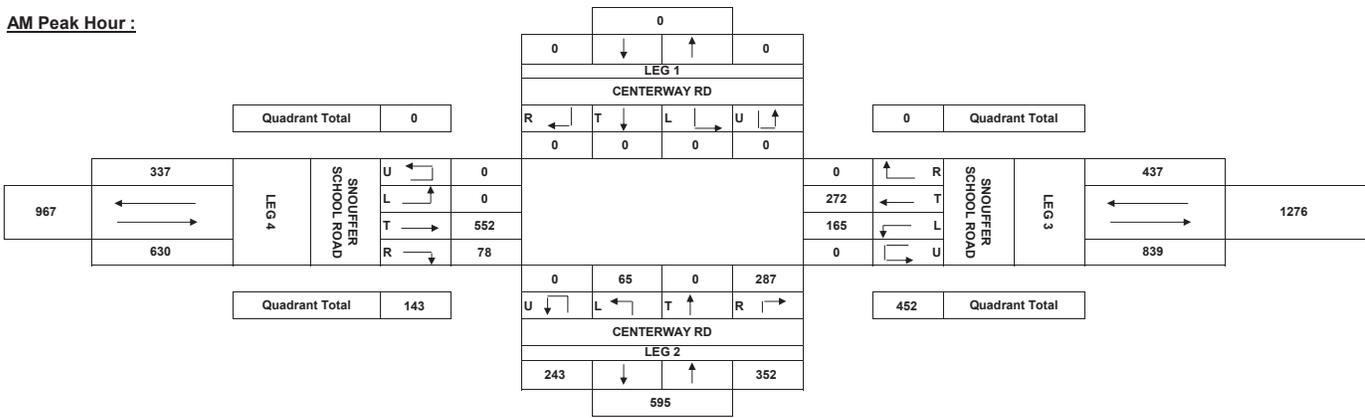
County: MONTGOMERY
 Town: GAITHERSBURG
 Weather: CLEAR

Turning Movement Summary:

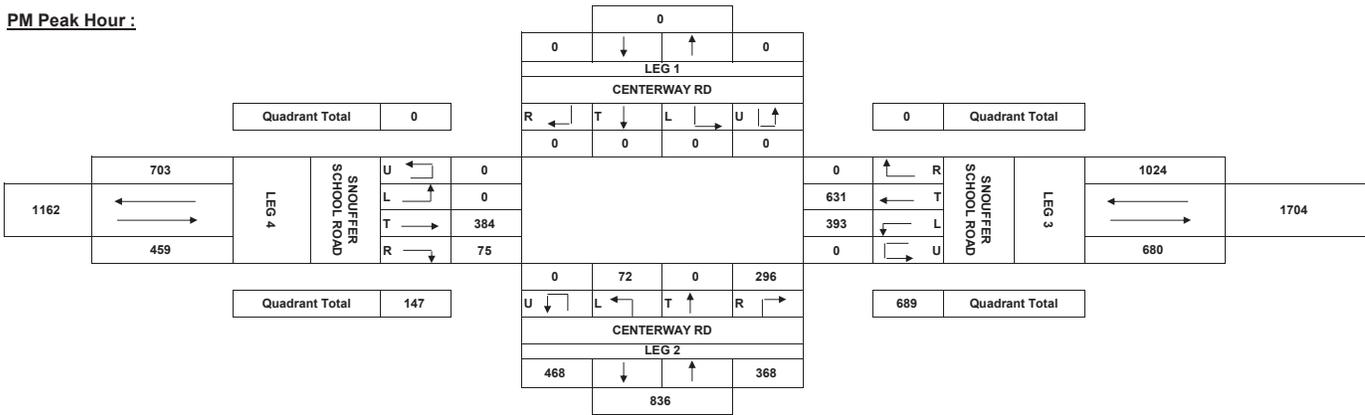


Comments:

AM Peak Hour:



PM Peak Hour:



Turning Movement Counts - Field Sheet

Job No.: 17-01-44

Location: SNOUFFER SCHOOL ROAD @ FLOWER HILL WAY
 Date: 3/18/2022 Wednesday
 Recorder: CSS
 Interval (dd) : 15
 (In Minutes)

County: MONTGOMERY
 Town: GAITHERSBURG
 Weather: CLEAR

PEAK HOURS	AM PERIOD 6:00AM-12:00PM	Start	End	Volume	LOS	V/C	PM PERIOD 12:00PM-7:00PM	Start	End	Volume	LOS	V/C
		07:45	08:45					16:45	17:45			
				1369						1763		

Street Name--> HOUR ENDING	FLOWER HILL WAY					FLOWER HILL WAY					SNOUFFER SCHOOL ROAD					SNOUFFER SCHOOL ROAD				
	U turn	From North			Total	U turn	From South			Total	U turn	From East			Total	U turn	From West			Total
		Left	Through	Right			Through	Right	Through			Right	Through	Right			Through	Right		
00:15					0					0										0
00:30					0					0										0
00:45					0					0										0
01:00					0					0										0
01:15					0					0										0
01:30					0					0										0
01:45					0					0										0
02:00					0					0										0
02:15					0					0										0
02:30					0					0										0
02:45					0					0										0
03:00					0					0										0
03:15					0					0										0
03:30					0					0										0
03:45					0					0										0
04:00					0					0										0
04:15					0					0										0
04:30					0					0										0
04:45					0					0										0
05:00					0					0										0
05:15					0					0										0
05:30					0					0										0
05:45					0					0										0
06:00					0					0										0
06:15	0	1	0	0	1	0	3	0	2	5	0	0	39	0	39	0	0	66	0	66
06:30	0	0	0	0	0	0	5	0	5	10	0	2	63	2	67	0	0	129	5	134
06:45	0	1	0	0	1	0	2	0	3	5	0	2	60	3	65	0	3	132	4	139
07:00	0	3	0	1	4	0	5	0	8	13	0	1	58	2	61	0	2	166	4	172
07:15	0	4	0	1	5	0	5	0	5	10	0	1	61	3	65	0	3	185	4	192
07:30	0	3	1	6	10	0	2	0	7	9	0	3	74	0	77	0	2	160	7	169
07:45	0	2	0	4	6	0	7	0	2	9	0	2	72	1	75	0	1	229	10	240
08:00	0	2	0	0	2	0	4	0	9	13	0	1	103	1	105	0	1	223	8	232
08:15	0	1	0	4	5	0	7	0	5	12	0	4	108	5	117	0	1	204	3	208
08:30	0	2	0	1	3	0	6	0	7	13	0	3	91	5	99	0	0	187	16	203
08:45	0	5	0	0	5	0	5	0	5	10	0	2	106	1	109	0	3	222	8	233
09:00	0	1	0	3	4	0	17	0	5	22	0	1	97	0	98	0	1	188	8	197
09:15	0	4	0	0	4	0	11	0	1	12	0	0	89	6	95	0	0	156	2	158
09:30	0	1	1	1	3	0	2	0	3	5	0	0	98	2	100	0	2	156	4	162
09:45	0	4	0	2	6	0	0	1	4	5	0	2	81	5	88	0	5	137	7	149
10:00	0	2	0	0	2	0	1	0	2	3	0	0	78	0	78	1	4	98	4	107
10:15	0	6	0	3	9	0	3	1	2	6	0	4	91	3	98	0	5	106	4	115
10:30	0	3	0	0	3	0	4	1	4	9	0	1	73	3	77	0	4	91	4	99
10:45	0	5	1	2	8	0	4	0	4	8	0	2	73	6	81	0	6	99	4	109
11:00	0	4	0	3	7	0	7	0	1	8	0	1	82	1	84	0	6	82	8	96
11:15	0	3	0	3	6	0	3	1	2	6	0	1	86	3	90	0	1	108	5	114
11:30	0	5	0	2	7	0	8	0	3	11	0	0	87	1	88	0	2	85	5	92
11:45	0	3	0	2	5	0	6	0	1	7	0	0	97	6	103	0	4	121	4	129
12:00	0	4	0	4	8	0	5	0	3	8	0	4	93	4	101	0	0	99	2	101
12:15	0	8	0	1	9	0	8	0	0	8	0	2	114	5	121	0	5	115	9	129
12:30	0	3	0	2	5	0	3	0	5	8	0	2	117	3	122	0	5	112	10	127
12:45	0	6	0	6	12	0	3	0	3	6	0	0	131	4	135	0	2	124	3	129
13:00	0	8	1	2	11	0	8	0	2	10	0	3	127	2	132	0	4	98	5	107
13:15	0	2	1	6	9	0	8	0	3	11	0	6	130	3	139	0	3	90	8	101
13:30	0	6	0	4	10	0	7	1	1	9	0	0	120	2	122	0	7	102	13	122
13:45	0	2	2	2	6	0	5	1	6	12	0	3	138	4	145	0	3	122	9	134
14:00	0	3	1	1	5	0	7	0	3	10	0	7	129	1	137	0	1	110	10	121
14:15	0	3	0	4	7	0	4	0	5	9	0	0	129	3	132	0	3	111	3	117
14:30	0	3	0	6	9	0	8	0	6	14	0	3	144	7	154	0	3	117	7	127
14:45	0	5	1	5	11	0	4	0	6	10	0	3	151	1	155	0	8	128	7	143
15:00	0	0	0	4	4	0	10	0	8	18	0	4	149	3	156	0	2	137	8	147
15:15	0	2	1	9	12	0	6	1	4	11	0	5	177	3	185	0	4	132	11	147
15:30	0	5	0	8	13	0	8	1	1	10	0	1	197	2	200	0	4	131	5	140
15:45	0	3	0	8	11	0	10	2	5	17	0	7	183	3	193	1	5	139	7	152
16:00	0	4	0	7	11	0	14	0	2	16	0	12	166	5	183	0	8	128	15	151
16:15	0	4	1	7	12	0	9	2	6	17	0	6	210	2	218	0	8	101	4	113
16:30	0	3	3	6	12	0	10	2	6	18	0	3	224	6	233	0	4	157	7	168
16:45	0	3	1	7	11	0	11	1	8	20	0	5	212	4	221	0	3	132	11	146
17:00	0	0	3	8	11	0	9	2	4	15	0	9	206	3	218	0	3	158	17	178
17:15	0	5	1	10	16	0	9	0	3	12	0	7	250	0	257	0	1	137	12	150
17:30	0	5	2	6	13	0	14	1	3	18	0	1	242	1	244	0	5	176	21	202
17:45	0	1	0	0	1	0	12	1	6	19	0	5	252	3	260	0	3	129	17	149
18:00	0	3	4	9	16	0	12	0	3	15	0	5	210	1	216	0	8	124	10	142
18:15	0	2	0	14	16	0	10	0	1	11	0	6	223	3	232	0	7	136	11	154
18:30	0	4	0	7	11	0	8	0	3	11	0	5	190	5	200	0	1	147	13	161
18:45	0	2	4	9	15	0	9	4	4	17	0	6	190	5	201	0	6	111	9	126
19:00	0	4	3	6	13	0	14	2	4	20	0	2	185	7	194	0	4	122	7	133
19:15					0					0										0
19:30					0					0										0
19:45					0					0										0
20:00					0					0										0
20:15					0					0										0
20:30					0					0										0
20:45					0					0										0
21:00					0					0										0
21:15					0					0										0
21:30					0					0										0
21:45					0					0										0
22:00					0					0										0
22:15					0					0										0
22:30					0					0										0
22:45					0					0										0
23:00					0															

Turning Movement Counts - Field Sheet

Job No.: 17-01-44

Location: SNOUFFER SCHOOL ROAD @ FLOWER HILL WAY
 Date: 3/18/2022 Wednesday
 Recorder: CSS
 Interval (dd): 15

County: MONTGOMERY
 Town: GAITHERSBURG
 Weather: CLEAR

SCHOOL CHILDREN, PEDESTRIANS & BICYCLES

Hour
Ending
00:15
00:30
00:45
01:00
01:15
01:30
01:45
02:00
02:15
02:30
02:45
03:00
03:15
03:30
03:45
04:00
04:15
04:30
04:45
05:00
05:15
05:30
05:45
06:00
06:15
06:30
06:45
07:00
07:15
07:30
07:45
08:00
08:15
08:30
08:45
09:00
09:15
09:30
09:45
10:00
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10:45
11:00
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12:00
12:15
12:30
12:45
13:00
13:15
13:30
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15:45
16:00
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16:45
17:00
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18:00
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18:30
18:45
19:00
19:15
19:30
19:45
20:00
20:15
20:30
20:45
21:00
21:15
21:30
21:45
22:00
22:15
22:30
22:45
23:00
23:15
23:30
23:45
00:00
TOTAL
AM Peak Vol
PM Peak Vol

From North FLOWER HILL WAY			
	Pedestrians	Bicycles	
06:15	0	0	
06:30	0	0	
06:45	0	0	
07:00	0	0	
07:15	0	0	
07:30	0	0	
07:45	0	0	
08:00	0	0	
08:15	1	0	
08:30	0	0	
08:45	0	0	
09:00	0	0	
09:15	0	0	
09:30	0	0	
09:45	0	0	
10:00	0	0	
10:15	0	0	
10:30	1	0	
10:45	0	0	
11:00	1	0	
11:15	0	0	
11:30	1	0	
11:45	0	0	
12:00	0	0	
12:15	0	0	
12:30	0	0	
12:45	0	0	
13:00	1	0	
13:15	0	0	
13:30	1	0	
13:45	0	0	
14:00	0	0	
14:15	0	0	
14:30	0	0	
14:45	0	0	
15:00	0	0	
15:15	0	0	
15:30	0	0	
15:45	0	0	
16:00	0	0	
16:15	1	0	
16:30	0	0	
16:45	0	0	
17:00	0	0	
17:15	0	0	
17:30	0	0	
17:45	0	0	
18:00	0	0	
18:15	4	0	
18:30	2	0	
18:45	0	0	
19:00	0	0	
TOTAL	0	13	0
AM Peak Vol	0	1	0
PM Peak Vol	0	0	0

From South FLOWER HILL WAY			
	Pedestrians	Bicycles	
06:15	0	0	
06:30	0	0	
06:45	0	0	
07:00	0	0	
07:15	2	0	
07:30	0	0	
07:45	0	0	
08:00	0	0	
08:15	0	0	
08:30	0	0	
08:45	0	0	
09:00	0	0	
09:15	2	0	
09:30	0	0	
09:45	1	0	
10:00	0	0	
10:15	0	0	
10:30	0	0	
10:45	0	0	
11:00	1	0	
11:15	1	0	
11:30	1	0	
11:45	0	0	
12:00	0	0	
12:15	0	0	
12:30	1	0	
12:45	0	0	
13:00	0	0	
13:15	0	0	
13:30	2	0	
13:45	0	0	
14:00	0	0	
14:15	0	0	
14:30	1	0	
14:45	1	0	
15:00	2	0	
15:15	1	0	
15:30	2	0	
15:45	2	0	
16:00	0	0	
16:15	0	0	
16:30	1	0	
16:45	1	0	
17:00	0	0	
17:15	1	0	
17:30	1	0	
17:45	2	0	
18:00	0	0	
18:15	0	0	
18:30	2	0	
18:45	0	0	
19:00	0	0	
TOTAL	0	27	0
AM Peak Vol	0	0	0
PM Peak Vol	0	4	0

From East SNOUFFER SCHOOL ROAD			
	Pedestrians	Bicycles	
06:15	0	0	
06:30	0	0	
06:45	0	0	
07:00	0	0	
07:15	1	0	
07:30	0	0	
07:45	0	0	
08:00	0	0	
08:15	0	0	
08:30	0	0	
08:45	0	0	
09:00	1	0	
09:15	1	0	
09:30	0	0	
09:45	0	0	
10:00	0	0	
10:15	1	0	
10:30	0	0	
10:45	0	0	
11:00	0	0	
11:15	0	0	
11:30	0	0	
11:45	0	0	
12:00	0	0	
12:15	0	0	
12:30	0	0	
12:45	0	0	
13:00	0	0	
13:15	0	0	
13:30	0	0	
13:45	0	0	
14:00	0	0	
14:15	0	0	
14:30	0	0	
14:45	0	0	
15:00	0	0	
15:15	0	0	
15:30	1	0	
15:45	1	0	
16:00	2	0	
16:15	0	0	
16:30	1	0	
16:45	0	0	
17:00	0	0	
17:15	0	0	
17:30	0	0	
17:45	2	0	
18:00	0	0	
18:15	1	0	
18:30	0	0	
18:45	0	0	
19:00	1	0	
TOTAL	0	13	0
AM Peak Vol	0	0	0
PM Peak Vol	0	2	0

From West SNOUFFER SCHOOL ROAD			
	Pedestrians	Bicycles	
06:15	0	0	
06:30	0	0	
06:45	0	0	
07:00	0	0	
07:15	0	0	
07:30	0	0	
07:45	0	0	
08:00	0	0	
08:15	1	0	
08:30	0	0	
08:45	0	0	
09:00	0	0	
09:15	0	0	
09:30	0	0	
09:45	0	0	
10:00	0	0	
10:15	0	0	
10:30	0	0	
10:45	0	0	
11:00	0	0	
11:15	0	1	
11:30	0	0	
11:45	0	0	
12:00	1	0	
12:15	0	0	
12:30	0	0	
12:45	0	0	
13:00	0	1	
13:15	0	0	
13:30	0	0	
13:45	0	0	
14:00	0	0	
14:15	0	0	
14:30	0	0	
14:45	1	0	
15:00	0	0	
15:15	0	0	
15:30	0	0	
15:45	0	0	
16:00	0	0	
16:15	0	0	
16:30	0	0	
16:45	0	0	
17:00	0	0	
17:15	0	0	
17:30	0	0	
17:45	0	0	
18:00	0	0	
18:15	0	0	
18:30	0	0	
18:45	0	0	
19:00	0	0	
TOTAL	0	4	2
AM Peak Vol	0	1	0
PM Peak Vol	0	0	0

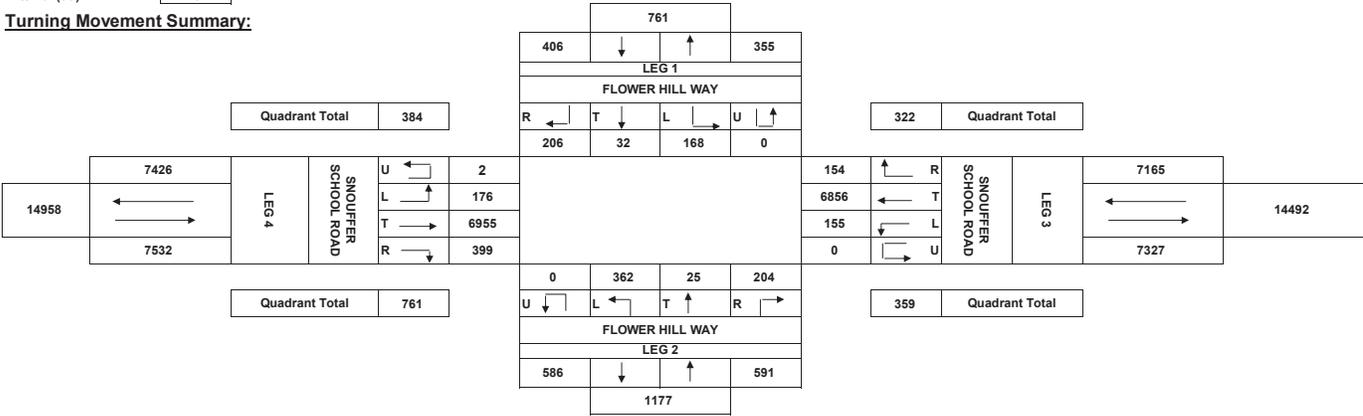
Turning Movement Counts - Field Sheet

Job No.: 17-01-44

Location: SNOUFFER SCHOOL ROAD @ FLOWER HILL WAY
 Date: 3/18/2022 Wednesday
 Recorder: CSS
 Interval (dd): 15

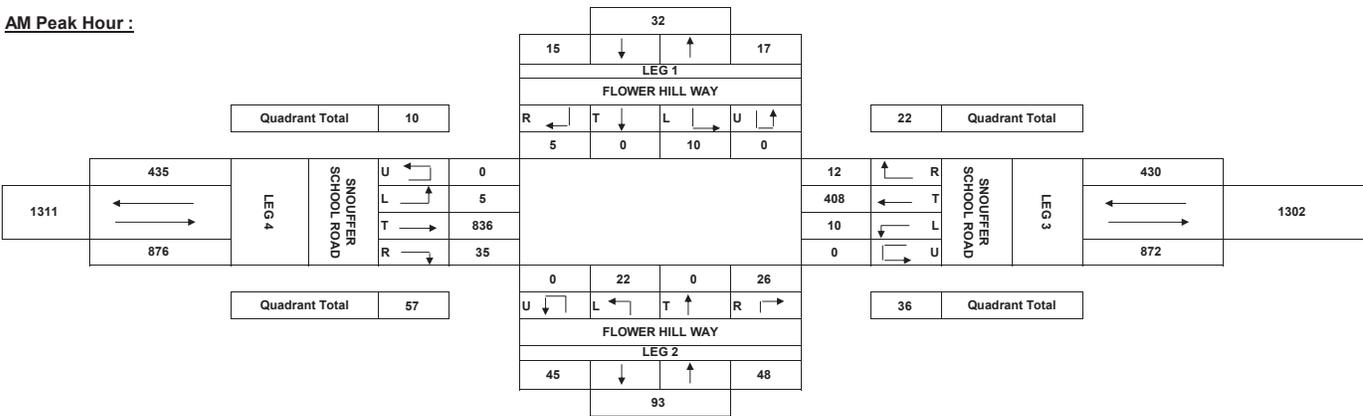
County: MONTGOMERY
 Town: GAITHERSBURG
 Weather: CLEAR

Turning Movement Summary:

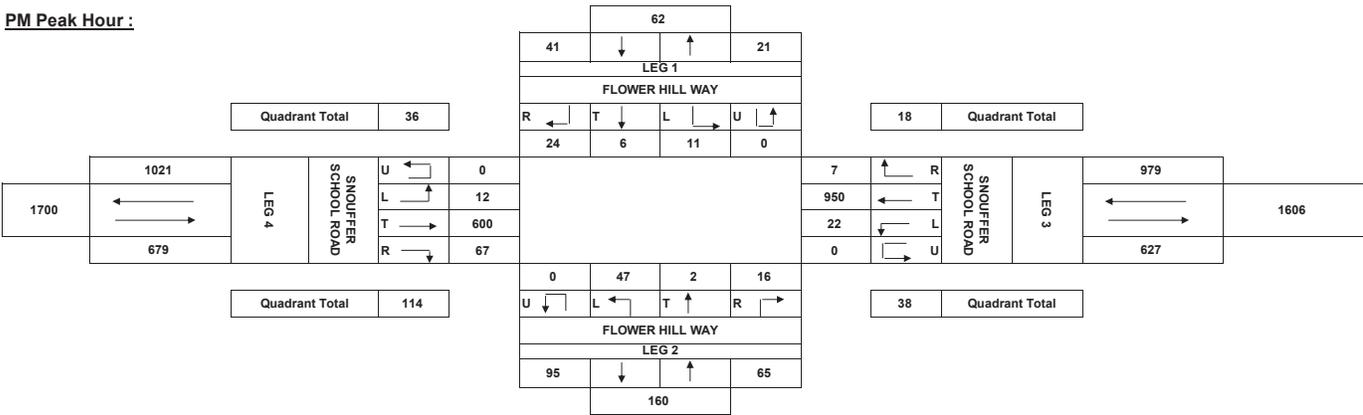


Comments:

AM Peak Hour:



PM Peak Hour:



Turning Movement Counts - Field Sheet

Job No.: 17-01-44

Location: SNOUFFER SCHOOL ROAD @ BONANZA WAY
 Date: 3/18/2022 Wednesday
 Recorder: CSS
 Interval (dd) : 15
 (In Minutes)

County: MONTGOMERY
 Town: GAITHERSBURG
 Weather: CLEAR

PEAK HOURS	AM PERIOD 6:00AM-12:00PM	Start	End	Volume	LOS	V/C	PM PERIOD 12:00PM-7:00PM	Start	End	Volume	LOS	V/C
		07:45	08:45					1367	16:45			

Street Name--> HOUR ENDING	BONANZA WAY					BONANZA WAY					SNOUFFER SCHOOL ROAD					SNOUFFER SCHOOL ROAD				
	U turn	Left	Through	Right	Total	U turn	Left	Through	Right	Total	U turn	Left	Through	Right	Total	U turn	Left	Through	Right	Total
00:15					0					0					0					0
00:30					0					0					0					0
00:45					0					0					0					0
01:00					0					0					0					0
01:15					0					0					0					0
01:30					0					0					0					0
01:45					0					0					0					0
02:00					0					0					0					0
02:15					0					0					0					0
02:30					0					0					0					0
02:45					0					0					0					0
03:00					0					0					0					0
03:15					0					0					0					0
03:30					0					0					0					0
03:45					0					0					0					0
04:00					0					0					0					0
04:15					0					0					0					0
04:30					0					0					0					0
04:45					0					0					0					0
05:00					0					0					0					0
05:15					0					0					0					0
05:30					0					0					0					0
05:45					0					0					0					0
06:00					0					0					0					0
06:15	0	1	0	5	6	0	2	0	2	4	0	0	49	4	53	0	19	103	0	122
06:30	0	4	0	15	19	0	1	0	2	3	0	1	53	1	55	0	13	122	0	135
06:45	0	3	0	11	14	0	1	0	3	4	0	0	54	1	55	0	14	119	0	133
07:00	0	1	0	3	4	0	1	0	1	2	0	0	59	6	65	0	26	142	0	168
07:15	0	3	0	14	17	0	0	0	1	1	0	1	53	8	61	0	24	174	0	198
07:30	0	8	0	10	18	0	2	0	2	4	0	0	66	5	71	0	9	159	1	189
07:45	0	0	0	9	9	0	0	0	2	2	0	0	70	3	73	0	16	219	0	235
08:00	0	2	0	6	8	0	2	0	1	3	0	1	101	11	113	0	21	211	0	232
08:15	0	2	0	8	10	0	2	0	3	5	0	2	108	9	119	0	11	196	2	209
08:30	0	4	0	2	6	0	1	0	0	1	0	0	95	8	103	0	11	185	1	197
08:45	0	3	0	9	12	0	3	0	4	7	0	2	97	10	109	0	22	209	2	233
09:00	0	3	0	2	5	0	0	0	1	1	0	0	92	10	102	0	17	178	0	195
09:15	0	6	0	7	13	0	0	0	2	2	0	2	88	10	100	0	9	145	2	156
09:30	0	4	0	7	11	0	2	0	2	4	0	1	97	13	111	0	10	150	1	161
09:45	0	5	0	8	13	0	2	0	0	2	0	1	76	9	86	0	10	126	3	139
10:00	0	0	0	7	7	0	1	0	0	1	0	1	74	4	79	0	12	90	0	102
10:15	0	6	0	6	12	0	2	0	3	5	0	0	94	6	100	0	15	99	0	114
10:30	0	4	0	8	12	0	1	0	2	3	0	0	68	6	74	0	12	85	0	97
10:45	0	5	0	8	13	0	0	0	1	0	0	0	174	9	183	0	14	91	1	106
11:00	0	7	0	7	14	0	3	1	1	5	0	0	71	6	77	0	4	83	1	88
11:15	0	4	0	14	18	0	0	0	2	2	0	0	75	6	81	0	9	96	1	106
11:30	0	5	0	10	15	0	1	0	2	3	0	0	75	9	84	0	9	86	1	96
11:45	0	7	0	8	15	0	0	0	1	1	0	0	100	12	112	0	10	112	2	124
12:00	0	5	0	8	13	0	0	0	1	1	0	0	89	5	94	0	12	88	2	102
12:15	0	6	0	13	19	0	0	0	0	0	0	0	113	9	122	0	9	107	0	116
12:30	0	8	0	14	22	0	0	0	1	1	0	0	117	5	122	0	15	99	0	114
12:45	0	10	0	12	22	0	0	0	0	0	0	0	127	8	135	0	12	122	1	135
13:00	0	6	0	27	33	0	0	0	1	1	0	2	117	4	123	0	22	86	1	109
13:15	0	5	0	22	27	0	1	0	1	2	0	0	108	9	117	0	3	82	0	85
13:30	0	3	0	14	17	0	0	0	1	1	0	0	113	7	120	0	13	99	1	113
13:45	0	4	0	19	23	0	3	0	2	3	0	0	121	5	126	0	12	115	1	128
14:00	0	8	0	23	31	0	1	0	1	2	0	0	107	12	119	0	10	114	1	125
14:15	0	7	0	16	23	0	0	0	3	3	0	2	122	8	132	0	4	116	1	121
14:30	0	9	0	17	26	0	2	0	1	3	0	1	128	7	136	0	7	117	3	127
14:45	0	0	0	18	18	0	1	0	0	1	0	0	135	4	139	0	6	128	1	135
15:00	0	4	0	15	19	0	0	0	2	2	0	2	140	5	147	0	15	135	0	150
15:15	0	7	0	16	23	0	1	0	2	3	0	0	167	6	173	0	12	118	2	132
15:30	0	8	0	9	17	0	0	0	0	0	0	1	198	4	203	0	11	131	0	142
15:45	0	2	0	17	19	0	0	0	0	0	0	0	180	2	182	0	11	134	0	145
16:00	0	7	0	17	24	0	0	0	2	2	0	1	166	7	174	0	11	131	1	143
16:15	0	10	0	29	39	0	0	0	1	1	0	2	193	10	205	0	9	106	2	117
16:30	0	8	0	33	41	0	0	0	1	1	0	1	207	10	218	0	14	146	4	164
16:45	0	6	0	31	37	0	1	0	1	2	0	2	187	10	199	0	14	129	1	144
17:00	0	2	0	18	20	0	2	0	0	2	0	2	205	8	215	0	10	149	0	159
17:15	0	9	0	31	40	0	0	0	1	1	0	1	217	6	224	0	21	122	0	143
17:30	0	11	0	34	45	0	0	0	0	0	0	1	218	7	226	0	21	166	3	190
17:45	0	5	0	20	25	0	0	0	1	1	0	2	235	3	240	0	8	123	2	133
18:00	0	8	0	21	29	0	0	0	2	2	0	2	194	12	208	0	14	111	3	128
18:15	0	3	0	21	24	0	0	0	0	0	0	3	216	3	222	0	12	124	0	136
18:30	0	7	0	18	25	0	2	1	2	5	0	2	177	10	189	0	4	142	1	147
18:45	0	2	0	28	30	0	4	0	2	6	0	2	173	5	180	0	8	105	3	116
19:00	0	2	0	12	14	0	0	0	3	3	0	3	185	2	190	0	7	112	1	120
19:15					0					0					0					0
19:30					0					0					0					0
19:45					0					0					0					0
20:00					0					0					0					0
20:15					0					0					0					0
20:30					0					0					0					0
20:45					0					0					0					0
21:00					0					0					0					0
21:15					0					0					0					0
21:30					0					0					0					0
21:45					0					0					0					0
22:00					0					0					0					0
22:15					0					0					0					0
22:30					0					0					0					0
22:45					0					0					0					0
23:00					0					0	</									

Turning Movement Counts - Field Sheet

Job No.: 17-01-44

Location: SNOUFFER SCHOOL ROAD @ BONANZA WAY
 Date: 3/18/2022 Wednesday
 Recorder: CSS
 Interval (dd): 15

County: MONTGOMERY
 Town: GAITHERSBURG
 Weather: CLEAR

SCHOOL CHILDREN, PEDESTRIANS & BICYCLES

Hour Ending	From North BONANZA WAY		From South BONANZA WAY		From East SNOUFFER SCHOOL ROAD		From West SNOUFFER SCHOOL ROAD	
	Pedestrians	Bicycles	Pedestrians	Bicycles	Pedestrians	Bicycles	Pedestrians	Bicycles
00:15								
00:30								
00:45								
01:00								
01:15								
01:30								
01:45								
02:00								
02:15								
02:30								
02:45								
03:00								
03:15								
03:30								
03:45								
04:00								
04:15								
04:30								
04:45								
05:00								
05:15								
05:30								
05:45								
06:00								
06:15	0	0	0	1	0	0	0	0
06:30	0	0	0	0	0	0	0	0
06:45	0	0	0	0	0	0	0	0
07:00	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0
07:30	0	0	0	0	1	0	0	0
07:45	0	0	1	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0
09:45	0	0	1	0	0	0	0	0
10:00	0	0	1	0	1	0	0	0
10:15	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0
10:45	1	0	2	0	0	0	0	0
11:00	0	0	1	0	0	0	1	0
11:15	0	0	0	0	0	0	0	0
11:30	1	0	1	0	0	0	0	0
11:45	0	0	1	0	0	0	0	0
12:00	0	0	0	0	1	0	0	0
12:15	0	1	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0
12:45	4	0	0	0	0	0	0	0
13:00	2	0	0	0	0	0	0	0
13:15	0	0	0	0	0	0	0	0
13:30	0	0	0	0	0	0	0	0
13:45	0	0	0	0	0	0	0	0
14:00	0	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0
14:45	0	0	0	0	1	0	0	0
15:00	0	0	1	0	0	0	0	0
15:15	0	0	0	0	0	0	0	0
15:30	0	1	2	0	0	0	0	0
15:45	0	0	0	0	0	0	0	0
16:00	0	0	1	0	0	0	1	0
16:15	0	0	0	0	0	0	0	0
16:30	0	0	2	0	1	0	0	0
16:45	0	0	2	0	0	0	0	0
17:00	1	0	0	0	0	0	1	0
17:15	0	0	0	0	0	0	0	0
17:30	0	0	1	0	1	0	0	0
17:45	0	0	1	0	0	0	0	0
18:00	3	0	1	0	3	0	0	0
18:15	1	0	1	0	0	0	0	0
18:30	1	0	3	0	0	0	2	0
18:45	1	0	0	0	0	0	0	0
19:00	2	0	1	0	0	0	0	0
19:15								
19:30								
19:45								
20:00								
20:15								
20:30								
20:45								
21:00								
21:15								
21:30								
21:45								
22:00								
22:15								
22:30								
22:45								
23:00								
23:15								
23:30								
23:45								
00:00								
TOTAL	0	17	2	0	0	9	0	0
AM Peak Vol	0	0	0	0	0	0	0	0
PM Peak Vol	0	1	0	0	0	1	0	0

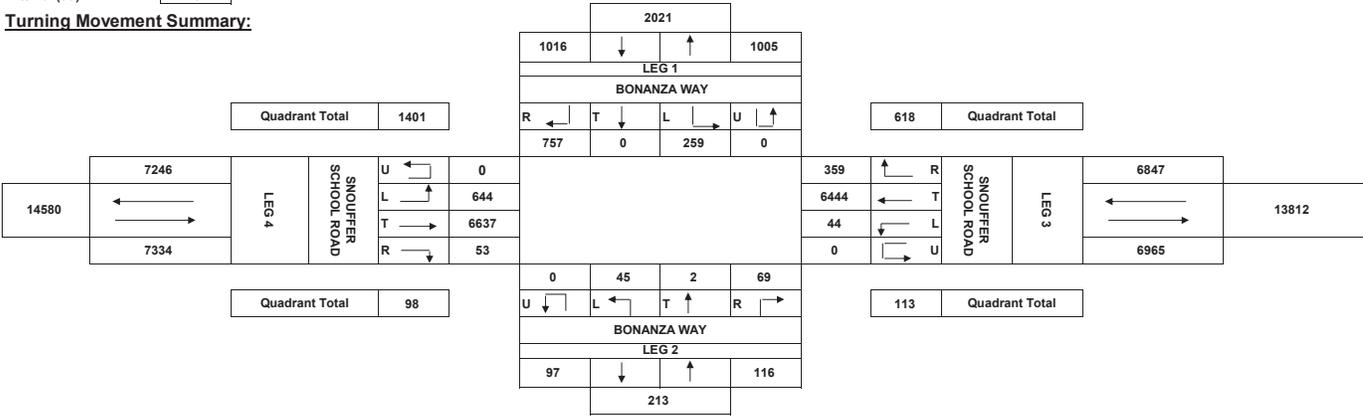
Turning Movement Counts - Field Sheet

Job No.: 17-01-44

Location: SNOUFFER SCHOOL ROAD @ BONANZA WAY
 Date: 3/18/2022 Wednesday
 Recorder: CSS
 Interval (dd): 15

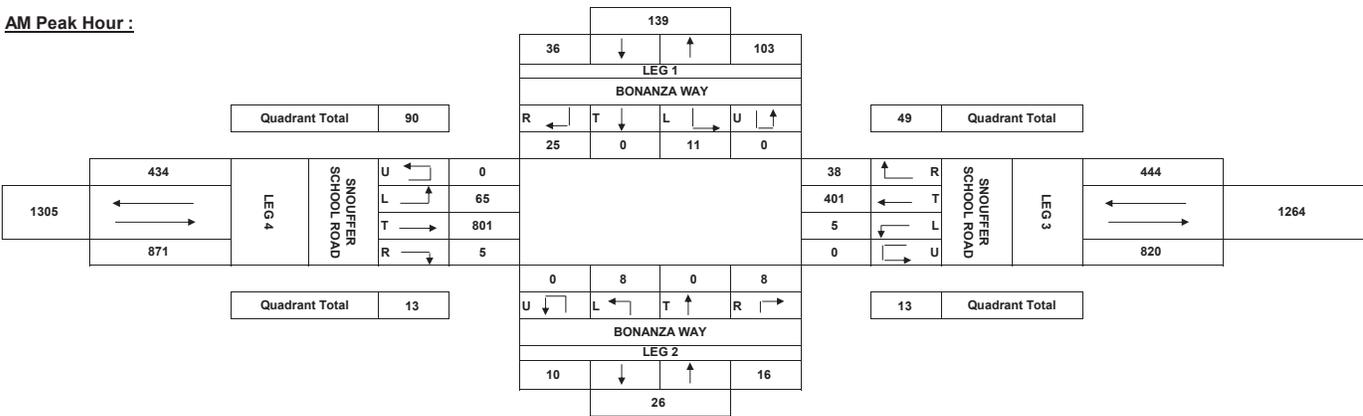
County: MONTGOMERY
 Town: GAITHERSBURG
 Weather: CLEAR

Turning Movement Summary:

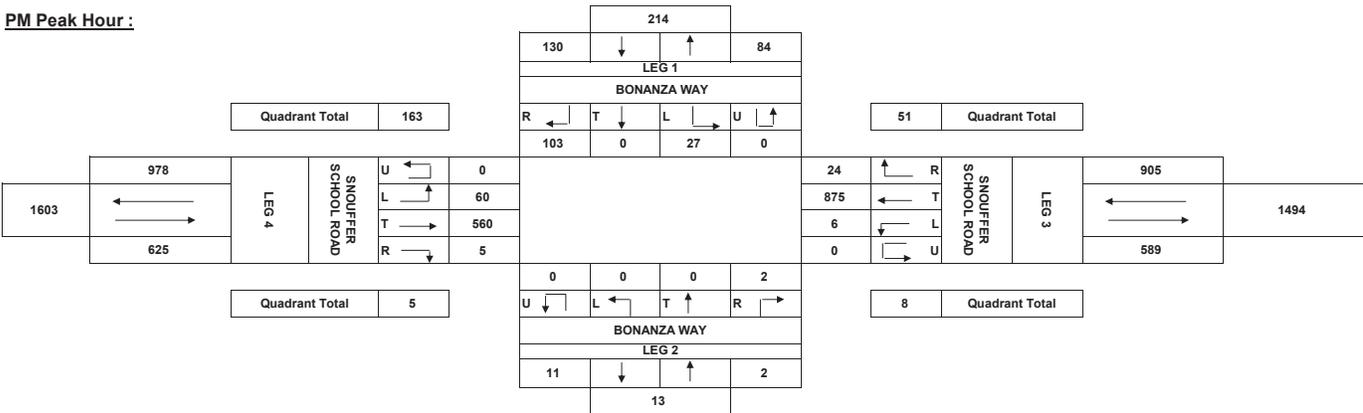


Comments:

AM Peak Hour:



PM Peak Hour:



Turning Movement Counts - Field Sheet

Job No.: 17-01-44

Location: Midblock Crosswalk - West of Carriage Walk Drive
 Date: 3/15/2022 Tuesday
 Recorder: CSS
 Interval (dd): 15

County: MONTGOMERY
 Town: SILVER SPRING
 Weather: CLEAR

SCHOOL CHILDREN, PEDESTRIANS & BICYCLES

Hour Ending	From North SSWALK WEST OF CARRIAGE WAL		
	Pedestrians	Bicycles	
00:15			
00:30			
00:45			
01:00			
01:15			
01:30			
01:45			
02:00			
02:15			
02:30			
02:45			
03:00			
03:15			
03:30			
03:45			
04:00			
04:15			
04:30			
04:45			
05:00			
05:15			
05:30			
05:45			
06:00			
06:15	0	0	
06:30	0	0	
06:45	0	0	
07:00	0	0	
07:15	0	0	
07:30	0	0	
07:45	0	0	
08:00	0	0	
08:15	0	0	
08:30	0	0	
08:45	0	0	
09:00	1	0	
09:15	1	0	
09:30	0	0	
09:45	0	0	
10:00	0	0	
10:15	0	0	
10:30	0	0	
10:45	0	0	
11:00	0	0	
11:15	0	0	
11:30	1	0	
11:45	0	0	
12:00	0	0	
12:15	0	0	
12:30	0	0	
12:45	1	0	
13:00	0	0	
13:15	0	0	
13:30	1	0	
13:45	0	0	
14:00	0	0	
14:15	1	0	
14:30	0	0	
14:45	0	0	
15:00	1	0	
15:15	0	0	
15:30	2	0	
15:45	0	0	
16:00	0	0	
16:15	0	0	
16:30	0	0	
16:45	1	0	
17:00	2	0	
17:15	0	0	
17:30	0	0	
17:45	0	0	
18:00	1	0	
18:15	0	0	
18:30	0	0	
18:45	0	0	
19:00	2	0	
19:15			
19:30			
19:45			
20:00			
20:15			
20:30			
20:45			
21:00			
21:15			
21:30			
21:45			
22:00			
22:15			
22:30			
22:45			
23:00			
23:15			
23:30			
23:45			
00:00			
TOTAL	0	15	0
AM Peak Vol	0	0	0
PM Peak Vol	0	1	0

Hour Ending	From South SSWALK WEST OF CARRIAGE WAL		
	Pedestrians	Bicycles	
00:15			
00:30			
00:45			
01:00			
01:15			
01:30			
01:45			
02:00			
02:15			
02:30			
02:45			
03:00			
03:15			
03:30			
03:45			
04:00			
04:15			
04:30			
04:45			
05:00			
05:15			
05:30			
05:45			
06:00			
06:15	0	0	
06:30	0	0	
06:45	0	0	
07:00	0	0	
07:15	0	0	
07:30	0	0	
07:45	0	0	
08:00	2	0	
08:15	0	0	
08:30	0	0	
08:45	0	0	
09:00	0	0	
09:15	0	0	
09:30	0	0	
09:45	0	0	
10:00	0	0	
10:15	0	0	
10:30	0	0	
10:45	0	0	
11:00	0	0	
11:15	0	0	
11:30	0	0	
11:45	0	0	
12:00	1	0	
12:15	0	0	
12:30	0	0	
12:45	1	0	
13:00	0	0	
13:15	0	0	
13:30	0	0	
13:45	1	0	
14:00	0	0	
14:15	1	0	
14:30	0	0	
14:45	0	0	
15:00	0	0	
15:15	1	0	
15:30	1	0	
15:45	2	0	
16:00	2	0	
16:15	2	0	
16:30	0	0	
16:45	1	0	
17:00	0	0	
17:15	0	0	
17:30	0	0	
17:45	0	0	
18:00	0	0	
18:15	0	0	
18:30	1	0	
18:45	0	0	
19:00	0	0	
19:15			
19:30			
19:45			
20:00			
20:15			
20:30			
20:45			
21:00			
21:15			
21:30			
21:45			
22:00			
22:15			
22:30			
22:45			
23:00			
23:15			
23:30			
23:45			
00:00			
TOTAL	0	16	0
AM Peak Vol	0	0	0
PM Peak Vol	0	1	0

Hour Ending	From East 0		
	Pedestrians	Bicycles	
00:15			
00:30			
00:45			
01:00			
01:15			
01:30			
01:45			
02:00			
02:15			
02:30			
02:45			
03:00			
03:15			
03:30			
03:45			
04:00			
04:15			
04:30			
04:45			
05:00			
05:15			
05:30			
05:45			
06:00			
06:15	0	0	
06:30	0	0	
06:45	0	0	
07:00	0	0	
07:15	0	0	
07:30	0	0	
07:45	0	0	
08:00	0	0	
08:15	0	0	
08:30	0	0	
08:45	0	0	
09:00	0	0	
09:15	0	0	
09:30	0	0	
09:45	0	0	
10:00	0	0	
10:15	0	0	
10:30	0	0	
10:45	0	0	
11:00	0	0	
11:15	0	0	
11:30	0	0	
11:45	0	0	
12:00	0	0	
12:15	0	0	
12:30	0	0	
12:45	0	0	
13:00	0	0	
13:15	0	0	
13:30	0	0	
13:45	0	0	
14:00	0	0	
14:15	0	0	
14:30	0	0	
14:45	0	0	
15:00	0	0	
15:15	0	0	
15:30	0	0	
15:45	0	0	
16:00	0	0	
16:15	0	0	
16:30	0	0	
16:45	0	0	
17:00	0	0	
17:15	0	0	
17:30	0	0	
17:45	0	0	
18:00	0	0	
18:15	0	0	
18:30	0	0	
18:45	0	0	
19:00	0	0	
19:15			
19:30			
19:45			
20:00			
20:15			
20:30			
20:45			
21:00			
21:15			
21:30			
21:45			
22:00			
22:15			
22:30			
22:45			
23:00			
23:15			
23:30			
23:45			
00:00			
TOTAL	0	0	0
AM Peak Vol	0	0	0
PM Peak Vol	0	0	0

Hour Ending	From West 0		
	Pedestrians	Bicycles	
00:15			
00:30			
00:45			
01:00			
01:15			
01:30			
01:45			
02:00			
02:15			
02:30			
02:45			
03:00			
03:15			
03:30			
03:45			
04:00			
04:15			
04:30			
04:45			
05:00			
05:15			
05:30			
05:45			
06:00			
06:15	0	0	
06:30	0	0	
06:45	0	0	
07:00	0	0	
07:15	0	0	
07:30	0	0	
07:45	0	0	
08:00	0	0	
08:15	0	0	
08:30	0	0	
08:45	0	0	
09:00	0	0	
09:15	0	0	
09:30	0	0	
09:45	0	0	
10:00	0	0	
10:15	0	0	
10:30	0	0	
10:45	0	0	
11:00	0	0	
11:15	0	0	
11:30	0	0	
11:45	0	0	
12:00	0	0	
12:15	0	0	
12:30	0	0	
12:45	0	0	
13:00	0	0	
13:15	0	0	
13:30	0	0	
13:45	0	0	
14:00	0	0	
14:15	0	0	
14:30	0	0	
14:45	0	0	
15:00	0	0	
15:15	0	0	
15:30	0	0	
15:45	0	0	
16:00	0	0	
16:15	0	0	
16:30	0	0	
16:45	0	0	
17:00	0	0	
17:15	0	0	
17:30	0	0	
17:45	0	0	
18:00	0	0	
18:15	0	0	
18:30	0	0	
18:45	0	0	
19:00	0	0	
19:15			
19:30			
19:45			
20:00			
20:15			
20:30			
20:45			
21:00			
21:15			
21:30			
21:45			
22:00			
22:15			
22:30			
22:45			
23:00			
23:15			
23:30			
23:45			
00:00			
TOTAL	0	0	0
AM Peak Vol	0	0	0
PM Peak Vol	0	0	0

Turning Movement Counts - Field Sheet

Job No.: 17-01-44

Location: SNOUFFER SCHOOL ROAD @ CARRIAGE WALK DRIVE
 Date: 3/18/2022 Wednesday
 Recorder: CSS
 Interval (dd) : 15
 (In Minutes)

County: MONTGOMERY
 Town: GAITHERSBURG
 Weather: CLEAR

PEAK HOURS	AM PERIOD 6:00AM-12:00PM	Start 07:45	End 08:45	Volume 1323	LOS	V/C	PM PERIOD 12:00PM-7:00PM	Start 16:45	End 17:45	Volume 1551	LOS	V/C

Street Name-->	CARRIAGE WALK DRIVE					SNOUFFER SCHOOL ROAD					SNOUFFER SCHOOL ROAD									
	U turn	Left	Through	Right	Total	U turn	Left	Through	Right	Total	U turn	Left	Through	Right	Total	U turn	Left	Through	Right	Total
00:15					0					0					0					0
00:30					0					0					0					0
00:45					0					0					0					0
01:00					0					0					0					0
01:15					0					0					0					0
01:30					0					0					0					0
01:45					0					0					0					0
02:00					0					0					0					0
02:15					0					0					0					0
02:30					0					0					0					0
02:45					0					0					0					0
03:00					0					0					0					0
03:15					0					0					0					0
03:30					0					0					0					0
03:45					0					0					0					0
04:00					0					0					0					0
04:15					0					0					0					0
04:30					0					0					0					0
04:45					0					0					0					0
05:00					0					0					0					0
05:15					0					0					0					0
05:30					0					0					0					0
05:45					0					0					0					0
06:00					0					0					0					0
06:15	0	0	0	0	0	0	0	0	3	3	0	0	56	0	56	0	0	107	1	108
06:30	0	0	0	0	0	0	0	5	5	5	0	0	55	0	55	0	0	133	1	134
06:45	0	0	0	0	0	0	3	2	5	5	0	3	53	0	56	0	0	135	0	135
07:00	0	0	0	0	0	0	1	3	4	4	0	1	68	0	69	0	0	144	0	144
07:15	0	0	0	0	0	0	2	0	7	9	0	4	58	0	62	0	0	192	0	192
07:30	0	0	0	0	0	0	1	0	10	11	0	5	90	0	95	0	0	179	0	179
07:45	0	0	0	0	0	0	0	0	5	5	0	0	86	0	86	0	0	226	1	227
08:00	0	0	0	0	0	0	1	0	6	7	0	2	121	0	123	0	0	217	0	217
08:15	0	0	0	0	0	0	2	0	4	6	0	1	117	0	118	0	0	199	1	200
08:30	0	0	0	0	0	0	0	0	5	5	0	2	120	0	122	0	0	184	0	184
08:45	0	0	0	0	0	0	0	0	10	10	0	1	110	0	111	0	0	218	2	220
09:00	0	0	0	0	0	0	4	0	3	7	0	2	116	0	118	0	0	193	4	197
09:15	0	0	0	0	0	0	0	0	6	6	0	3	107	0	110	0	0	152	1	153
09:30	0	0	0	0	0	0	1	0	3	4	0	2	117	0	119	0	0	148	2	150
09:45	0	0	0	0	0	0	1	0	2	3	0	4	92	0	96	0	0	133	0	133
10:00	0	0	0	0	0	0	0	1	3	4	0	3	91	0	94	0	0	94	0	94
10:15	0	0	0	0	0	0	1	0	6	7	0	2	104	0	106	0	0	113	1	114
10:30	0	0	0	0	0	0	0	0	2	2	0	1	72	0	73	0	0	98	1	99
10:45	0	0	0	0	0	0	0	1	3	4	0	2	93	0	95	0	0	100	0	100
11:00	0	0	0	0	0	0	0	0	3	3	0	2	82	0	84	0	0	92	0	92
11:15	0	0	0	0	0	0	1	0	2	3	0	3	90	0	93	0	0	96	1	97
11:30	0	0	0	0	0	0	0	0	1	1	0	2	95	0	97	0	0	101	1	102
11:45	0	0	0	0	0	0	3	0	2	5	0	1	112	0	113	0	0	121	2	123
12:00	0	0	0	0	0	0	1	0	4	5	0	1	100	0	101	0	0	95	4	99
12:15	0	0	0	0	0	0	0	0	2	2	0	1	128	0	129	0	0	118	2	120
12:30	0	0	0	0	0	0	1	0	3	4	0	1	130	0	131	0	0	112	0	112
12:45	0	0	0	0	0	0	1	0	1	2	0	3	139	0	142	0	0	128	2	130
13:00	0	0	0	0	0	0	2	0	1	3	0	0	129	0	129	0	0	92	2	94
13:15	0	0	0	0	0	0	1	0	2	3	0	2	121	0	123	0	0	84	2	86
13:30	0	0	0	0	0	0	2	0	2	4	0	4	125	0	129	0	0	102	1	103
13:45	0	0	0	0	0	0	2	0	3	5	0	3	131	0	134	0	0	127	0	127
14:00	0	0	0	0	0	0	0	0	1	1	0	1	127	0	128	0	0	125	1	126
14:15	0	0	0	0	0	0	0	0	2	2	0	3	144	0	147	0	0	130	2	132
14:30	0	0	0	0	0	0	0	0	1	1	0	3	151	0	154	0	0	134	2	136
14:45	0	0	0	0	0	0	2	0	4	6	0	1	145	0	146	0	0	130	2	132
15:00	0	0	0	0	0	0	1	0	4	5	0	1	154	0	155	0	0	142	0	142
15:15	0	0	0	0	0	0	1	0	2	3	0	2	181	0	183	0	0	133	2	135
15:30	0	0	0	0	0	0	4	0	4	8	0	2	202	0	204	0	0	140	3	143
15:45	0	0	0	0	0	0	1	0	4	5	0	5	198	0	203	0	0	130	8	138
16:00	0	0	0	0	0	0	1	0	2	3	0	4	171	0	175	0	0	130	3	133
16:15	0	0	0	0	0	0	2	0	3	5	0	6	211	0	217	0	0	118	2	120
16:30	0	0	0	0	0	0	1	0	6	7	0	4	220	0	224	0	0	161	2	163
16:45	0	0	0	0	0	0	1	0	2	3	0	4	212	0	216	0	0	141	3	144
17:00	0	0	0	0	0	0	3	0	5	8	0	5	222	0	227	0	0	142	5	147
17:15	0	0	0	0	0	0	5	0	3	8	0	4	211	0	215	0	0	130	5	135
17:30	0	0	0	0	0	0	5	0	2	7	0	6	235	0	241	0	0	174	6	180
17:45	0	0	0	0	0	0	3	0	6	9	0	6	242	0	248	0	0	122	4	126
18:00	0	0	0	0	0	0	0	0	4	4	0	3	205	0	208	0	0	121	0	121
18:15	0	0	0	0	0	0	2	0	6	8	0	6	212	0	218	0	0	128	2	130
18:30	0	0	0	0	0	0	0	0	4	4	0	8	185	0	193	0	0	156	1	157
18:45	0	0	0	0	0	0	1	0	8	9	0	3	181	0	184	0	0	111	1	112
19:00	0	0	0	0	0	0	1	0	2	3	0	9	189	0	198	0	0	118	3	121
19:15					0					0					0					0
19:30					0					0					0					0
19:45					0					0					0					0
20:00					0					0					0					0
20:15					0					0					0					0
20:30					0					0					0					0
20:45					0					0					0					0
21:00					0					0					0					0
21:15					0					0					0					0
21:30					0					0					0					0
21:45					0					0					0					0
22:00					0					0					0					0
22:15					0					0					0					0
22:30					0					0					0					0
22:45					0					0					0					0
23:00					0					0					0					0
23:15					0					0					0					0

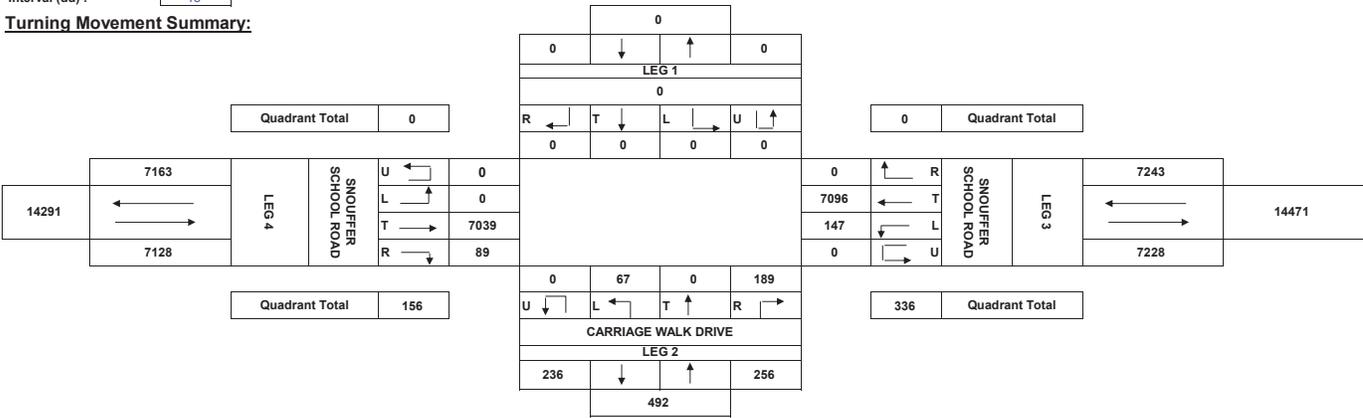
Turning Movement Counts - Field Sheet

Job No.: 17-01-44

Location: SNOUFFER SCHOOL ROAD @ CARRIAGE WALK DRIVE
 Date: 3/18/2022 Wednesday
 Recorder: CSS
 Interval (dd): 15

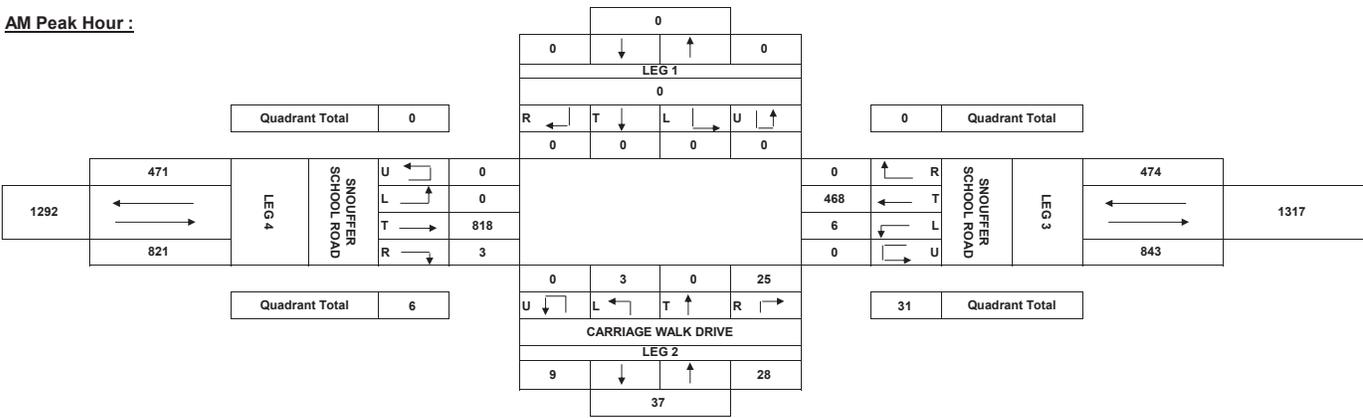
County: MONTGOMERY
 Town: GAITHERSBURG
 Weather: CLEAR

Turning Movement Summary:

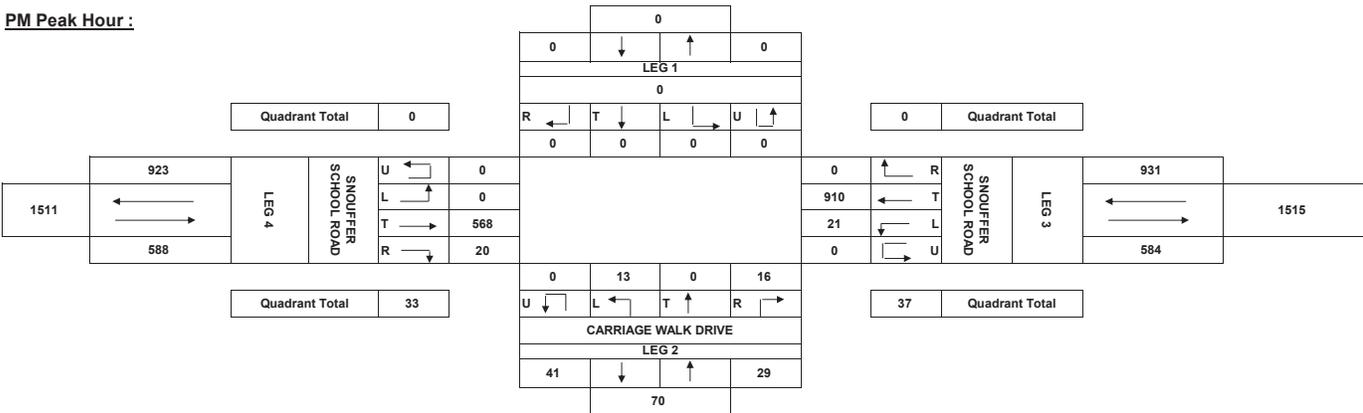


Comments:

AM Peak Hour:



PM Peak Hour:



Turning Movement Counts - Field Sheet

Job No.: 17-01-44

Location: SNOUFFER SCHOOL ROAD @ CHERRY LAUREL LN-MOONEY DR
 Date: 3/18/2022 Wednesday
 Recorder: CSS
 Interval (dd) : 15
 (In Minutes)

County: MONTGOMERY
 Town: GAITHERSBURG
 Weather: CLEAR

PEAK HOURS	AM PERIOD 6:00AM-12:00PM	Start 07:45	End 08:45	Volume 1537	LOS	V/C	PM PERIOD 12:00PM-7:00PM	Start 16:30	End 17:30	Volume 1710	LOS	V/C
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Street Name--> HOURLY ENDING	MOONEY DR					CHERRY LAUREL LN					SNOUFFER SCHOOL ROAD					SNOUFFER SCHOOL ROAD										
	U turn	Left	Through	Right	Total	U turn	Left	Through	Right	Total	U turn	Left	Through	Right	Total	U turn	Left	Through	Right	Total						
00:15					0					0					0					0					0	
00:30					0					0					0						0					0
00:45					0					0					0						0					0
01:00					0					0					0						0					0
01:15					0					0					0						0					0
01:30					0					0					0						0					0
01:45					0					0					0						0					0
02:00					0					0					0						0					0
02:15					0					0					0						0					0
02:30					0					0					0						0					0
02:45					0					0					0						0					0
03:00					0					0					0						0					0
03:15					0					0					0						0					0
03:30					0					0					0						0					0
03:45					0					0					0						0					0
04:00					0					0					0						0					0
04:15					0					0					0						0					0
04:30					0					0					0						0					0
04:45					0					0					0						0					0
05:00					0					0					0						0					0
05:15					0					0					0						0					0
05:30					0					0					0						0					0
05:45					0					0					0						0					0
06:00					0					0					0						0					0
06:15	0	1	0	6	7	0	35	0	5	40	0	0	47	19	66	0	7	92	0	99						
06:30	0	0	1	3	4	0	33	0	0	33	0	0	55	21	76	0	7	134	0	141						
06:45	0	2	0	6	8	0	29	0	1	30	0	0	56	29	85	0	7	125	0	132						
07:00	0	0	2	15	17	0	21	0	1	22	0	0	66	23	89	0	3	153	0	156						
07:15	0	0	0	14	14	0	28	0	1	29	0	1	60	18	79	0	4	172	0	176						
07:30	0	2	0	8	10	0	25	1	1	27	0	3	80	30	113	0	8	196	2	204						
07:45	0	4	0	8	12	0	17	0	1	17	0	3	82	16	101	0	5	213	1	219						
08:00	0	1	0	11	12	0	15	0	1	16	0	2	122	23	147	0	4	233	1	238						
08:15	0	4	0	6	10	0	14	1	3	18	0	3	116	19	138	0	6	204	0	210						
08:30	0	2	0	5	7	0	23	1	3	27	0	0	112	24	136	0	4	190	3	197						
08:45	0	1	0	6	7	0	23	1	0	24	0	2	107	22	131	0	3	210	6	219						
09:00	0	0	0	14	14	0	14	0	0	14	0	3	118	22	143	0	6	206	4	216						
09:15	0	1	1	7	9	0	15	2	6	23	0	0	104	27	131	0	8	150	1	159						
09:30	0	1	0	8	9	0	15	0	2	17	0	0	106	23	129	0	14	145	3	162						
09:45	0	1	0	3	4	0	18	0	6	24	0	5	92	26	123	0	9	128	1	138						
10:00	0	1	0	11	12	0	20	1	9	30	0	3	81	24	108	0	6	100	2	108						
10:15	0	3	0	7	10	0	26	0	3	29	0	3	96	23	122	0	8	110	3	121						
10:30	0	1	1	4	6	0	14	0	5	19	0	4	67	16	87	0	4	95	0	99						
10:45	0	2	0	5	7	0	20	0	2	22	0	2	88	22	112	0	2	100	0	102						
11:00	0	0	1	0	1	0	22	0	2	24	0	4	78	20	102	0	3	93	1	97						
11:15	0	2	1	3	6	0	15	1	2	18	0	1	88	24	113	0	2	85	0	87						
11:30	0	0	1	3	4	0	19	1	5	25	0	2	88	22	112	0	5	97	2	104						
11:45	0	0	2	4	6	0	16	2	6	24	0	3	103	16	122	0	6	116	0	122						
12:00	0	4	0	3	7	0	30	1	7	38	0	5	83	37	125	0	5	94	1	100						
12:15	0	0	0	8	8	0	28	0	6	34	0	3	123	26	152	0	4	119	3	126						
12:30	0	0	4	2	6	0	19	2	7	28	0	5	119	26	150	0	13	115	1	129						
12:45	0	3	1	3	7	0	21	1	8	30	0	3	127	35	165	0	7	120	3	130						
13:00	0	4	0	3	7	0	28	0	4	32	0	2	124	27	153	0	3	89	3	95						
13:15	0	1	0	6	7	0	22	0	11	33	0	2	108	14	124	0	5	85	2	92						
13:30	0	0	1	3	4	0	21	0	10	31	0	3	115	25	143	0	3	100	4	107						
13:45	0	1	0	1	2	0	20	0	6	26	0	4	124	22	150	0	8	132	1	139						
14:00	0	1	2	2	5	0	14	0	8	22	0	5	117	27	149	0	3	117	0	120						
14:15	0	3	1	3	7	0	16	0	4	20	0	6	137	28	171	0	7	129	1	137						
14:30	0	2	0	4	6	0	26	2	7	35	0	4	145	21	170	0	3	133	3	139						
14:45	0	5	1	5	11	0	18	0	5	23	0	3	134	19	156	0	4	130	1	135						
15:00	0	4	1	7	12	0	21	4	4	29	0	6	152	19	177	0	6	143	1	150						
15:15	0	2	0	3	5	0	17	3	6	26	0	7	167	14	188	0	3	136	3	142						
15:30	0	1	0	8	9	0	19	0	4	23	0	4	191	29	224	0	1	144	2	147						
15:45	0	3	1	11	15	0	20	0	7	27	0	5	193	20	218	0	4	128	4	136						
16:00	0	2	0	4	6	0	11	1	9	21	0	4	162	23	189	0	3	132	1	136						
16:15	0	2	1	2	5	0	25	0	10	35	0	8	201	18	227	0	5	122	0	127						
16:30	0	3	0	5	8	0	19	0	11	30	0	2	207	19	228	0	5	163	2	170						
16:45	0	2	1	2	5	0	38	1	11	50	0	3	205	16	224	0	3	140	3	146						
17:00	0	3	0	7	10	0	19	1	7	27	0	9	205	11	225	0	6	132	1	139						
17:15	0	2	1	3	6	0	31	0	10	41	0	4	209	16	229	0	5	131	1	137						
17:30	0	0	1	5	6	0	24	0	8	32	0	8	220	20	248	0	4	177	4	185						
17:45	0	1	0	4	5	0	20	0	8	28	0	7	236	17	260	0	4	122	5	131						
18:00	0	3	0	4	7	0	15	0	3	18	0	6	204	22	232	0	3	118	3	124						
18:15	0	3	0	6	9	0	26	0	4	30	0	5	203	17	225	0	4	129	3	136						
18:30	0	4	0	3	7	0	20	0	6	26	0	8	181	24	213	0	6	150	4	160						
18:45	0	2	0	7	9	0	16	1	3	20	0	4	181	16	201	0	3	117	3	123						
19:00	0	3	0	7	10	0	15	0																		

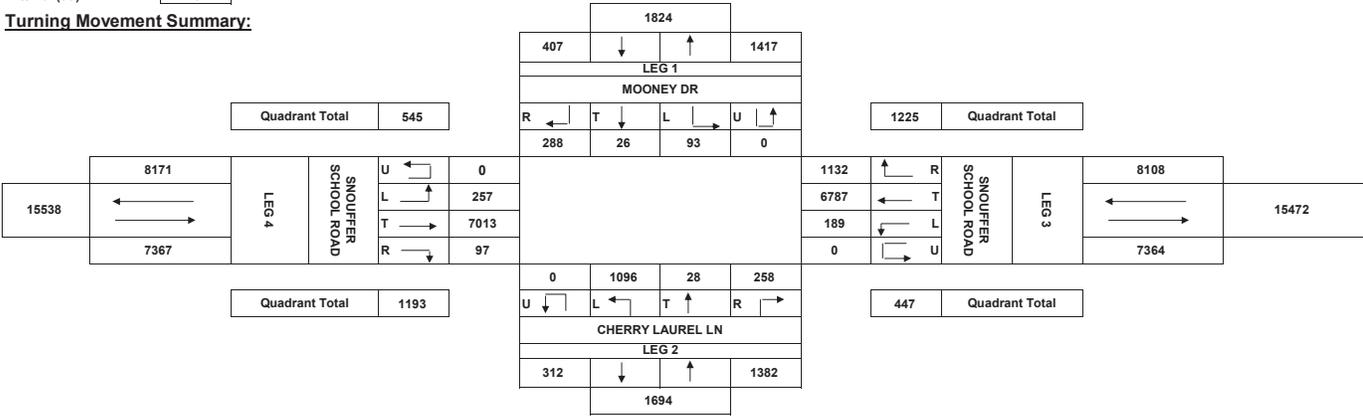
Turning Movement Counts - Field Sheet

Job No.: 17-01-44

Location: SNOUFFER SCHOOL ROAD @ CHERRY LAUREL LN-MOONEY DR
 Date: 3/18/2022 Wednesday
 Recorder: CSS
 Interval (dd): 15

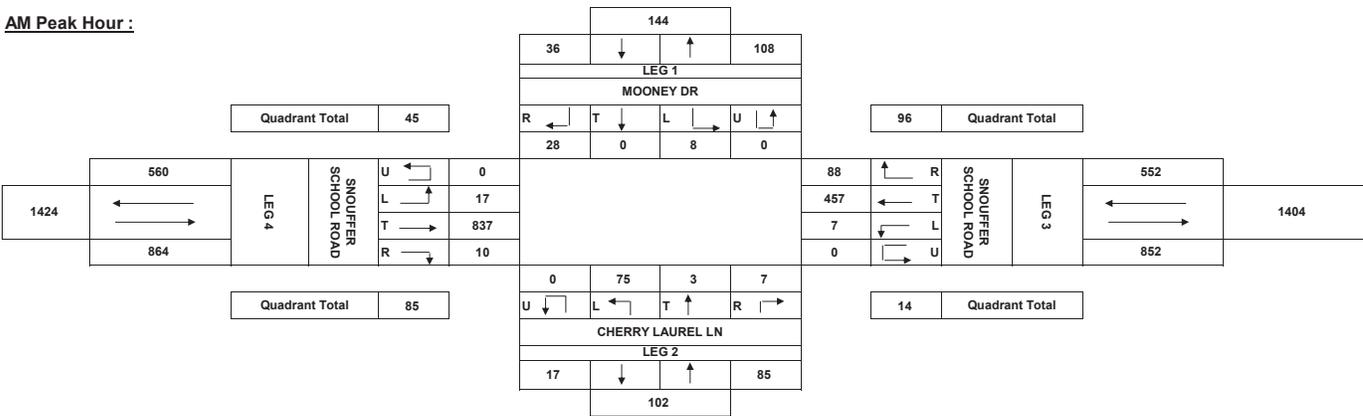
County: MONTGOMERY
 Town: GAITHERSBURG
 Weather: CLEAR

Turning Movement Summary:

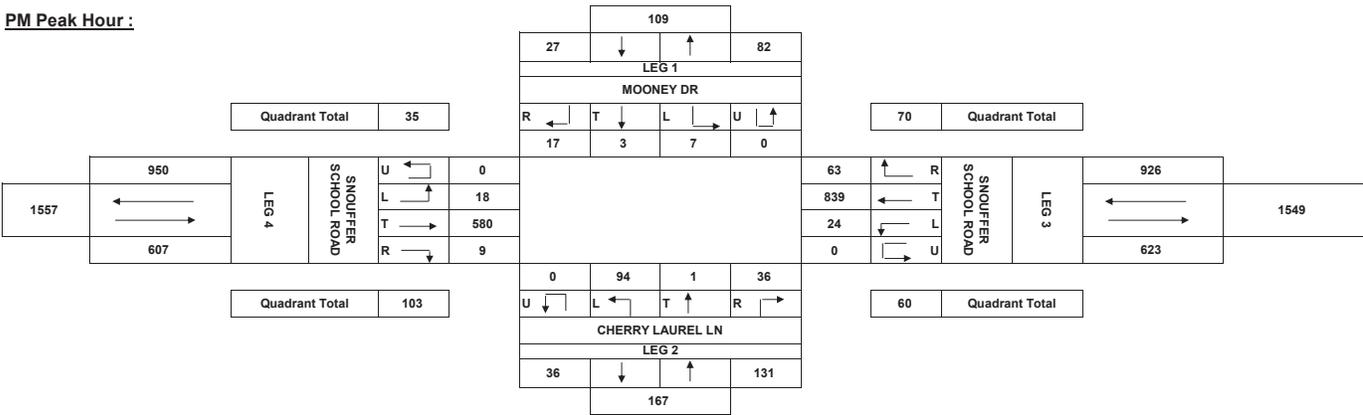


Comments:

AM Peak Hour:



PM Peak Hour:



Montgomery County Department of Transportation
 Division of Traffic Engineering & Operations
 Turning Movement Counts - Field Sheet

MCV Associates, Inc.
 4605-C Pinecrest Office Park Drive
 Alexandria VA 22312-1442

Request No: DRF-1032
 Location: Driveway @ Snouffers School Rd
 Date: 7/24/2019 Wednesday
 Recorder:
 Interval (dd): 15
 (In Minutes)



County: Montgomery
 Town: Gaithersburg
 Weather: Sunny



PEAK HOURS	AM PERIOD 6:00AM-12:00PM	Start 07:45	End 08:45	Volume 1556	LOS A	V/C 0.40	PM PERIOD 12:00PM-7:00PM	Start 16:45	End 17:45	Volume 1785	LOS A	V/C 0.46
------------	--------------------------	-------------	-----------	-------------	-------	----------	--------------------------	-------------	-----------	-------------	-------	----------

Street Name--> HOUR	Driveway					Sweet Autumn Dr					Snouffers School Rd					Snouffers School Rd					
	From North					From South					From East					From West					
	U turn	Left	Through	Right	Total	U turn	Left	Through	Right	Total	U turn	Left	Through	Right	Total	U turn	Left	Through	Right	Total	
BEGINNING																					
06:00	0	2	0	1	3	0	0	0	5	5	0	0	77	6	83	0	0	139	0	139	
06:15	0	8	0	0	8	0	0	0	5	5	0	0	87	7	94	0	0	214	0	214	
06:30	0	11	0	0	11	0	1	1	7	9	0	2	87	12	101	0	1	231	0	232	
06:45	0	7	0	1	8	0	0	0	8	8	1	1	90	9	101	0	0	249	0	249	
07:00	0	5	0	0	5	0	0	0	5	5	0	0	104	11	115	0	3	227	0	230	
07:15	0	9	0	1	10	0	1	0	4	5	0	2	99	10	111	0	0	234	1	235	
07:30	0	5	0	2	7	0	0	0	5	5	0	2	119	4	125	0	0	284	3	287	
07:45	0	6	0	1	7	0	1	0	10	11	0	2	119	4	125	0	0	226	1	227	
08:00	0	6	0	2	8	0	1	1	6	8	0	1	121	8	130	0	1	270	1	272	
08:15	0	5	0	2	7	0	1	0	11	12	0	2	115	10	127	0	0	208	2	210	
08:30	0	5	0	4	9	0	1	0	11	12	0	2	146	10	158	0	2	230	1	233	
08:45	0	9	0	0	9	0	3	0	6	9	0	2	117	7	126	0	0	205	3	208	
09:00	0	5	0	1	6	0	3	0	6	9	1	2	133	8	144	0	0	192	0	192	
09:15	0	4	0	0	4	0	1	0	4	5	1	3	122	7	133	0	0	151	0	151	
09:30	0	7	0	1	8	0	1	0	11	12	0	4	113	9	126	0	1	157	0	158	
09:45	0	4	0	2	6	0	0	0	5	5	0	5	112	6	123	0	1	145	2	148	
10:00	0	3	0	1	4	0	2	0	4	6	0	1	99	9	109	0	0	137	2	139	
10:15	0	3	0	4	7	0	0	0	7	7	0	1	115	9	125	0	0	123	1	124	
10:30	0	5	0	0	5	0	1	1	7	9	0	5	106	5	116	0	0	116	1	117	
10:45	0	2	0	1	3	0	1	0	3	4	0	4	113	10	127	0	0	128	1	129	
11:00	0	1	0	1	2	0	2	0	3	5	2	3	118	7	130	0	0	147	1	148	
11:15	0	2	1	0	3	0	0	0	7	7	0	4	117	5	126	0	0	136	1	137	
11:30	0	6	0	0	6	0	0	0	4	4	0	4	116	13	133	0	0	151	1	152	
11:45	0	6	0	1	7	0	1	0	6	7	1	3	133	9	146	0	1	151	0	152	
12:00	0	8	0	3	11	0	0	0	3	3	0	1	137	13	151	0	1	153	3	157	
12:15	0	3	0	0	3	0	2	1	5	8	2	6	152	11	171	0	3	149	2	154	
12:30	0	8	0	0	8	0	3	1	7	11	1	7	154	13	175	0	0	140	3	143	
12:45	0	3	0	0	3	0	0	1	2	3	0	4	145	12	161	0	0	130	2	132	
13:00	0	6	0	1	7	0	5	1	7	13	1	3	171	11	186	0	0	121	2	123	
13:15	0	3	0	0	3	0	0	0	2	2	0	4	127	11	142	0	1	147	0	148	
13:30	0	3	0	2	5	0	1	1	6	8	1	0	150	9	160	0	0	109	2	111	
13:45	0	8	0	1	9	0	1	0	9	10	1	2	130	8	141	0	0	124	2	126	
14:00	0	7	0	0	7	0	0	0	7	7	0	5	131	13	149	0	1	133	2	136	
14:15	0	5	0	0	5	0	2	1	5	8	2	4	164	13	183	0	0	137	3	140	
14:30	0	7	1	1	9	0	1	0	3	4	0	3	155	11	169	0	0	125	1	126	
14:45	0	4	0	0	4	0	0	0	6	6	1	13	167	5	186	0	1	150	0	151	
15:00	0	4	0	0	4	0	1	0	1	2	1	4	172	11	188	0	0	154	0	154	
15:15	0	2	0	1	3	0	1	0	2	3	1	8	157	10	176	0	1	187	1	189	
15:30	0	3	0	0	3	0	2	0	3	5	2	3	189	7	201	0	0	150	0	150	
15:45	0	3	0	0	3	0	1	0	5	6	1	3	178	8	190	0	0	142	1	143	
16:00	0	2	0	0	2	0	2	1	0	3	0	5	227	12	244	1	1	156	2	160	
16:15	0	4	0	0	4	0	2	1	1	4	0	6	207	13	226	0	0	156	2	158	
16:30	0	6	1	0	7	0	1	0	2	3	0	4	214	10	228	0	0	141	0	141	
16:45	0	4	0	2	6	0	2	0	4	6	0	5	223	12	240	0	1	158	6	165	
17:00	0	2	0	0	2	0	2	0	9	11	0	11	252	16	279	0	1	170	4	175	
17:15	0	3	0	0	3	0	1	0	2	3	0	5	276	17	298	0	0	167	1	168	
17:30	0	7	0	1	8	0	2	0	5	7	2	5	243	18	268	0	0	154	2	156	
17:45	0	4	0	3	7	0	2	0	3	5	0	2	234	9	245	0	0	116	2	118	
18:00	0	4	0	1	5	0	1	0	2	3	0	10	259	13	282	0	0	136	1	137	
18:15	0	6	0	0	6	0	0	1	7	8	0	5	226	22	253	0	1	150	3	154	
18:30	0	5	2	1	8	0	2	0	5	7	0	11	223	10	244	0	0	128	1	129	
18:45	0	5	0	1	6	0	1	0	4	5	0	8	242	10	260	0	0	125	2	127	
TOTAL	0	255	5	43	303	0	59	12	268	339	22	202	7983	523	8730	1	22	8429	72	8524	
AM Peak Vol	0	22	0	9	31	0	4	1	38	43	0	7	501	32	540	0	3	934	5	942	
PM Peak Vol	0	16	0	3	19	0	7	0	20	27	2	26	994	63	1085	0	2	639	13	654	

Request No: DRF-1032
 Location: Driveway @ Snouffers School Rd
 Date: 7/24/2019 Wednesday
 Recorder:
 Interval (dd): 15
 (In Minutes)

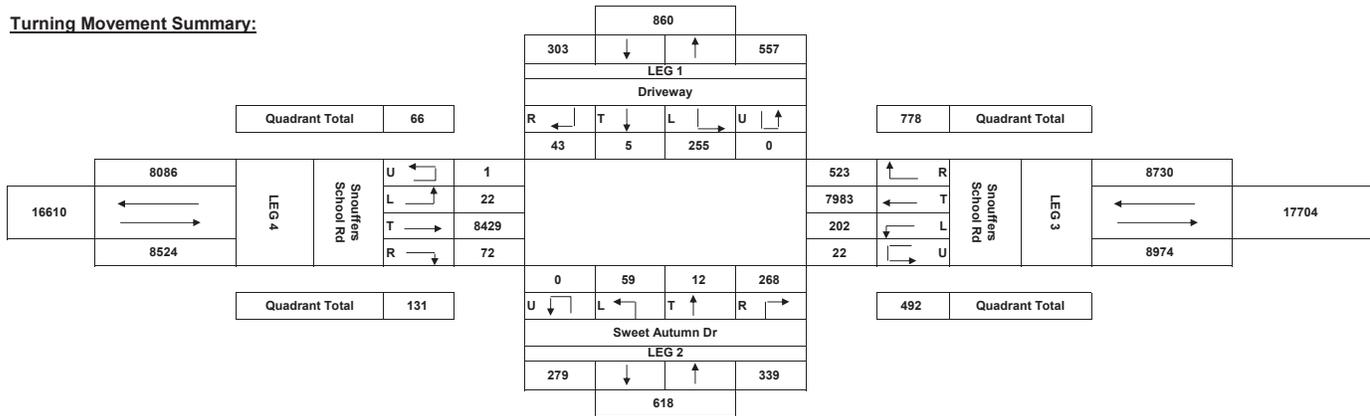


County: Montgomery
 Town: Gaithersburg
 Weather: Sunny



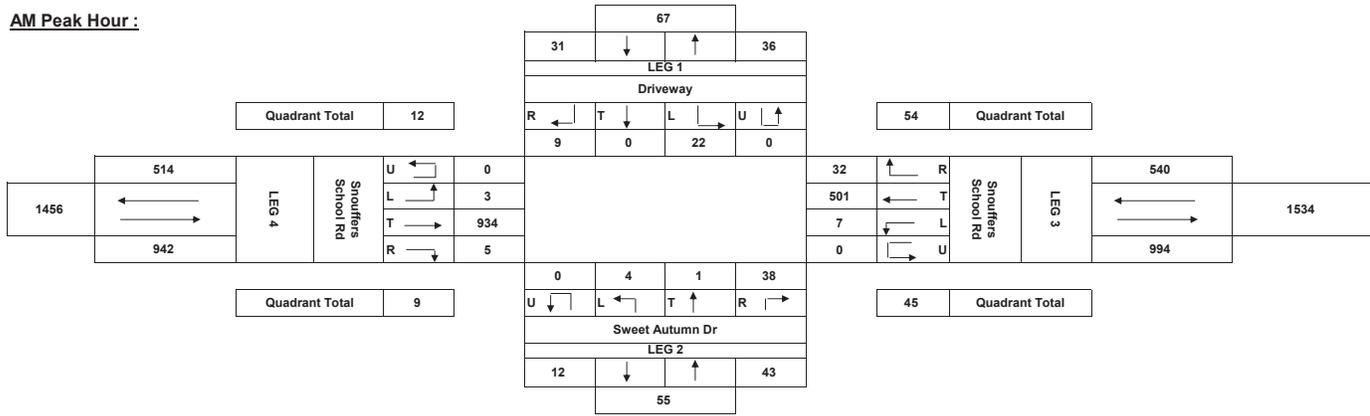
PEAK HOURS	AM PERIOD 6:00AM-12:00PM	Start	End	Volume	LOS	V/C	PM PERIOD 12:00PM-7:00PM	Start	End	Volume	LOS	V/C
		07:45	08:45	1556	A	0.40		16:45	17:45	1785	A	0.46

Turning Movement Summary:

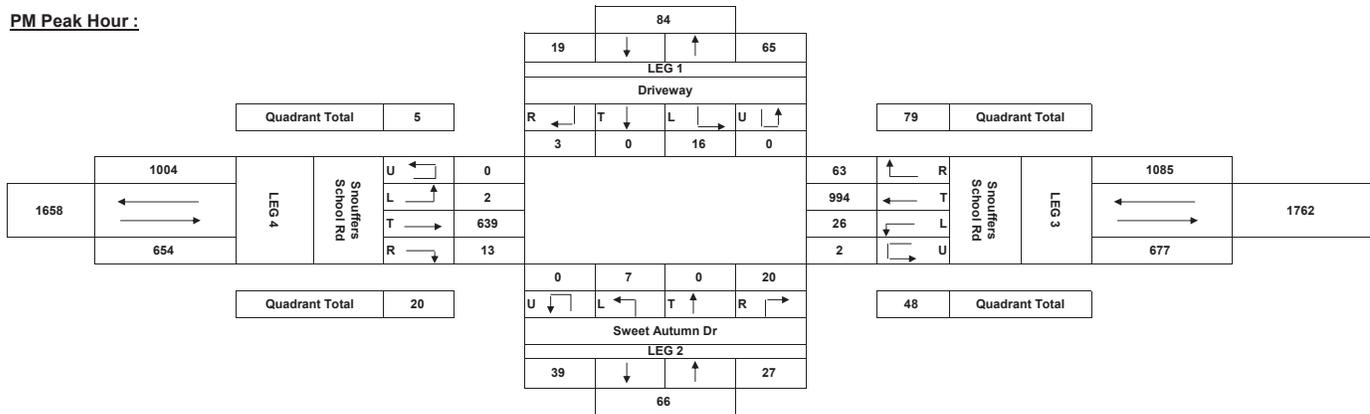


Comments: _____

AM Peak Hour :



PM Peak Hour :



Turning Movement Counts - Field Sheet

Job No.: 17-01-44

Location: SNOUFFER SCHOOL ROAD @ MD 124-WOODFIELD RD
 Date: 3/18/2022 Wednesday
 Recorder: CSS
 Interval (dd): 15

County: MONTGOMERY
 Town: GAITHERSBURG
 Weather: CLEAR

SCHOOL CHILDREN, PEDESTRIANS & BICYCLES

Hour
Ending
00:15
00:30
00:45
01:00
01:15
01:30
01:45
02:00
02:15
02:30
02:45
03:00
03:15
03:30
03:45
04:00
04:15
04:30
04:45
05:00
05:15
05:30
05:45
06:00
06:15
06:30
06:45
07:00
07:15
07:30
07:45
08:00
08:15
08:30
08:45
09:00
09:15
09:30
09:45
10:00
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10:30
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11:00
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19:45
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20:15
20:30
20:45
21:00
21:15
21:30
21:45
22:00
22:15
22:30
22:45
23:00
23:15
23:30
23:45
00:00
TOTAL
AM Peak Vol
PM Peak Vol

From North WOODFIELD RD		
	Pedestrians	Bicycles
06:00	0	0
06:15	0	0
06:30	2	0
06:45	0	0
07:00	0	0
07:15	0	1
07:30	0	0
07:45	0	0
08:00	0	0
08:15	0	0
08:30	0	0
08:45	0	0
09:00	1	0
09:15	0	0
09:30	1	0
09:45	0	0
10:00	0	0
10:15	1	0
10:30	0	0
10:45	0	0
11:00	0	0
11:15	1	0
11:30	1	0
11:45	0	0
12:00	1	0
12:15	0	0
12:30	5	0
12:45	0	0
13:00	2	0
13:15	0	0
13:30	0	0
13:45	0	0
14:00	0	0
14:15	1	0
14:30	0	0
14:45	0	0
15:00	0	0
15:15	0	2
15:30	0	1
15:45	0	0
16:00	2	0
16:15	0	0
16:30	1	0
16:45	0	0
17:00	1	0
17:15	2	0
17:30	0	0
17:45	1	0
18:00	1	0
18:15	0	0
18:30	0	0
18:45	3	0
19:00	4	0
TOTAL	0	31
AM Peak Vol	0	0
PM Peak Vol	0	4

From South MD 124		
	Pedestrians	Bicycles
06:00	2	0
06:15	1	0
06:30	0	0
06:45	0	0
07:00	0	0
07:15	0	0
07:30	1	0
07:45	0	0
08:00	1	0
08:15	1	0
08:30	0	0
08:45	0	0
09:00	0	0
09:15	1	0
09:30	0	0
09:45	1	0
10:00	0	0
10:15	0	0
10:30	0	0
10:45	0	0
11:00	1	0
11:15	0	0
11:30	0	0
11:45	0	0
12:00	1	0
12:15	0	0
12:30	0	0
12:45	0	0
13:00	0	0
13:15	1	0
13:30	0	0
13:45	0	0
14:00	3	0
14:15	0	0
14:30	3	0
14:45	0	0
15:00	1	0
15:15	1	0
15:30	1	0
15:45	1	0
16:00	2	0
16:15	2	0
16:30	2	0
16:45	0	0
17:00	0	0
17:15	0	0
17:30	0	0
17:45	1	0
18:00	0	0
18:15	1	0
18:30	0	0
18:45	0	0
19:00	2	0
TOTAL	0	28
AM Peak Vol	0	3
PM Peak Vol	0	1

From East SNOUFFER SCHOOL ROAD		
	Pedestrians	Bicycles
06:00	0	0
06:15	2	0
06:30	0	0
06:45	0	0
07:00	0	0
07:15	0	0
07:30	1	0
07:45	0	0
08:00	0	0
08:15	1	0
08:30	0	0
08:45	0	0
09:00	0	0
09:15	0	0
09:30	0	0
09:45	0	0
10:00	0	0
10:15	2	0
10:30	1	0
10:45	0	0
11:00	0	0
11:15	1	0
11:30	0	0
11:45	0	0
12:00	2	0
12:15	0	0
12:30	2	0
12:45	3	0
13:00	0	0
13:15	2	0
13:30	0	0
13:45	0	0
14:00	0	0
14:15	5	0
14:30	1	0
14:45	2	0
15:00	2	0
15:15	0	0
15:30	1	0
15:45	2	0
16:00	0	0
16:15	0	0
16:30	2	0
16:45	3	0
17:00	4	0
17:15	1	0
17:30	2	0
17:45	3	0
18:00	2	0
18:15	1	0
18:30	0	0
18:45	0	0
19:00	0	0
TOTAL	0	48
AM Peak Vol	0	1
PM Peak Vol	0	10

From West SNOUFFER SCHOOL ROAD		
	Pedestrians	Bicycles
06:00	0	0
06:15	1	0
06:30	0	0
06:45	0	0
07:00	0	0
07:15	0	0
07:30	1	0
07:45	1	0
08:00	6	0
08:15	7	0
08:30	0	0
08:45	0	0
09:00	0	0
09:15	0	0
09:30	0	0
09:45	0	0
10:00	0	0
10:15	1	0
10:30	0	0
10:45	0	0
11:00	0	0
11:15	0	0
11:30	2	0
11:45	0	0
12:00	3	0
12:15	0	0
12:30	0	0
12:45	0	0
13:00	0	0
13:15	0	0
13:30	0	0
13:45	2	0
14:00	2	0
14:15	1	0
14:30	1	0
14:45	0	0
15:00	0	0
15:15	2	0
15:30	2	0
15:45	1	0
16:00	1	0
16:15	1	0
16:30	2	0
16:45	2	0
17:00	0	0
17:15	3	0
17:30	1	0
17:45	1	0
18:00	1	0
18:15	1	0
18:30	0	0
18:45	1	0
19:00	5	0
TOTAL	0	52
AM Peak Vol	0	13
PM Peak Vol	0	5

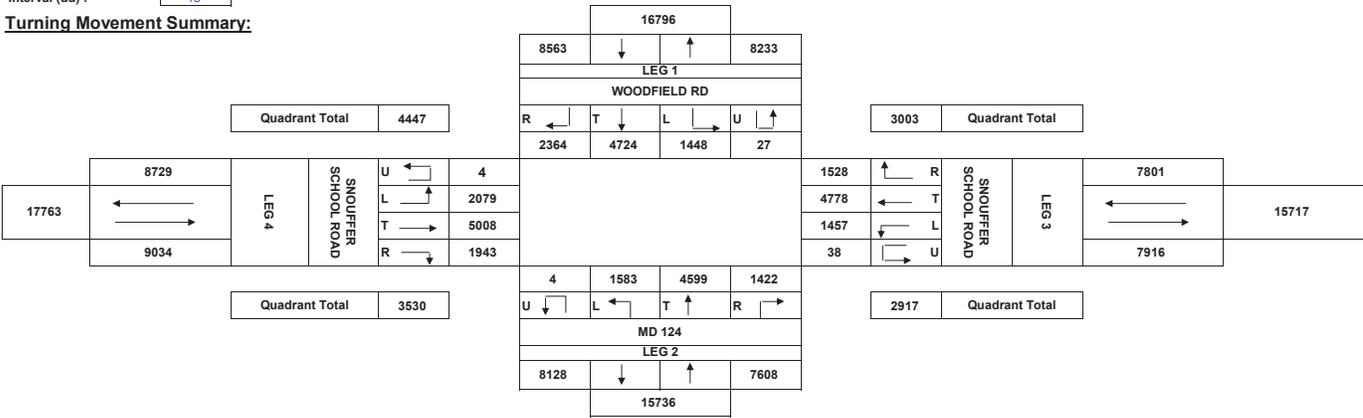
Turning Movement Counts - Field Sheet

Job No.: 17-01-44

Location: SNOUFFER SCHOOL ROAD @ MD 124-WOODFIELD RD
 Date: 3/18/2022 Wednesday
 Recorder: CSS
 Interval (dd): 15

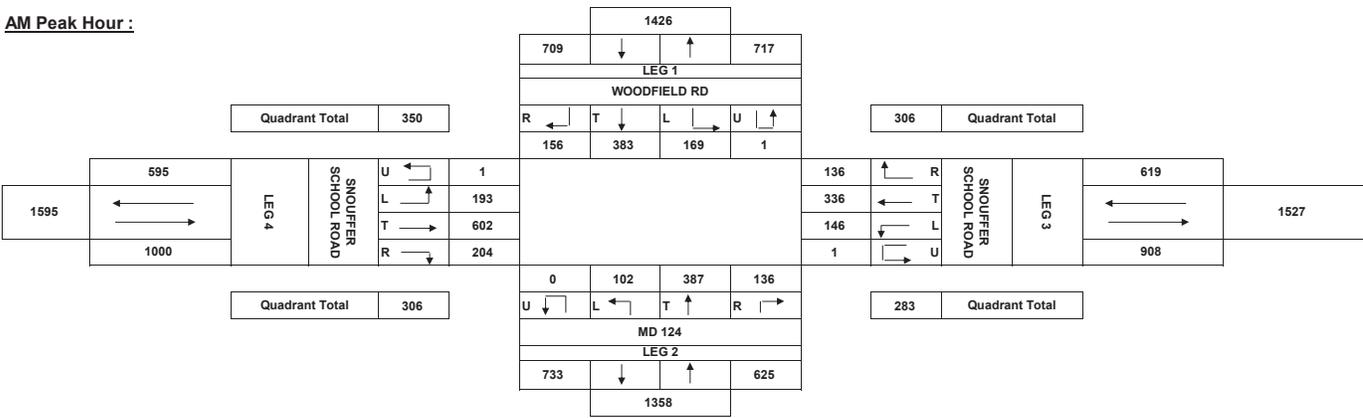
County: MONTGOMERY
 Town: GAITHERSBURG
 Weather: CLEAR

Turning Movement Summary:

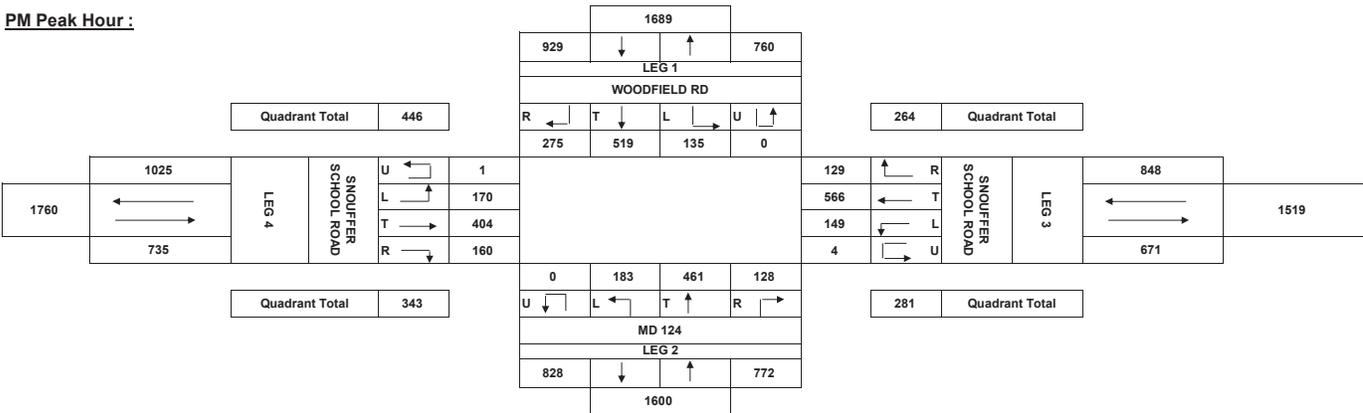


Comments:

AM Peak Hour:



PM Peak Hour:



APPENDIX

B

Speed Data Materials

USLIMITS2 Speed Zoning Report

Project Overview

Project Name: Snouffer School Road HIN

Analyst: ES

Date: 2022-07-25

Basic Project Information

Route Name: Snouffer School Road
From: Centerway Road
To: MD 124 Woodfield Road
State: Maryland
County: Montgomery County
City: Gaithersburg city
Route Type: Road Section in Developed Area
Route Status: Existing

Crash Data Information

Crash Data Years: 7.00
Crash AADT: 24792 veh/day
Total Number of Crashes: 242
Total Number of Injury Crashes: 57
Section Crash Rate: 318 per 100 MVM
Section Injury Crash Rate: 75 per 100 MVM
Crash Rate Average for Similar Roads: 231
Injury Rate Average for Similar Roads: 77

Roadway Information

Section Length: 1.2 mile(s)
Statutory Speed Limit: 40 mph
Existing Speed Limit: 40 mph
Adverse Alignment: No
One-Way Street: No
Divided/Undivided: TWLTL
Number of Through Lanes: 4
Area Type: Residential-Collector/Arterial
Number of Driveways: 33
Number of Signals: 3

Traffic Information

85th Percentile Speed: 48 mph
50th Percentile Speed: 42 mph
AADT: 24792 veh/day
On Street Parking and Usage: Not High
Pedestrian / Bicyclist Activity: High

Recommended Speed Limit:



Note: The section crash rate of 318 per 100 MVM is above the critical rate (261). A comprehensive crash study should be undertaken to identify engineering and traffic control deficiencies and appropriate corrective actions. The speed limit should only be reduced as a last measure after all other treatments have either been tried or ruled out.

Note: The road section is in an area with high pedestrian or bicycle activity. Consider implementing engineering measures to reduce speeds before lowering the recommended speed limit. See [Engineering Countermeasures for Speed Management](#) and [PedSafe](#) for more guidance.

Disclaimer: The U.S. Government assumes no liability for the use of the information contained in this report. This report does not constitute a standard, specification, or regulation.

Equations Used in the Crash Data Calculations

Exposure (M)

$$M = (\text{Section AADT} * 365 * \text{Section Length} * \text{Duration of Crash Data}) / (100000000)$$

$$M = (24792 * 365 * 1.2 * 7.00) / (100000000)$$

$$M = 0.7601$$

Crash Rate (Rc)

$$Rc = (\text{Section Crash Average} * 100000000) / (\text{Section AADT} * 365 * \text{Section Length})$$

$$Rc = (34.57 * 100000000) / (24792 * 365 * 1.2)$$

$$Rc = 318.37 \text{ crashes per 100 MVM}$$

Injury Rate (Ri)

$$Ri = (\text{Section Injury Crash Average} * 100000000) / (\text{Section AADT} * 365 * \text{Section Length})$$

$$Ri = (8.14 * 100000000) / (24792 * 365 * 1.2)$$

$$Ri = 74.99 \text{ injuries per 100 MVM}$$

Critical Crash Rate (Cc)

$$Cc = \text{Crash Average of Similar Sections} + 1.645 * (\text{Crash Average of Similar Sections} / \text{Exposure}) ^ (1/2) + (1 /$$

(2 * Exposure))

$$C_c = 231.25 + 1.645 * (231.25 / 0.7601)^{(1/2)} + (1 / (2 * 0.7601))$$

$C_c = 260.60$ crashes per 100 MVM

Critical Injury Rate (Ic)

$$I_c = \text{Injury Crash Average of Similar Sections} + 1.645 * (\text{Injury Crash Average of Similar Sections} / \text{Exposure})^{(1/2)} + (1 / (2 * \text{Exposure}))$$

$$I_c = 77.17 + 1.645 * (77.17 / 0.7601)^{(1/2)} + (1 / (2 * 0.7601))$$

$I_c = 94.41$ injuries per 100 MVM

Connor Speed Report

Dataset

Site Name SNOUFFER SCH.RD EB
 Direction East

Monday, March 21, 2022

Time [--	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Vpp 50	JPSL 40
0000	0	0	1	5	8	14	8	6	3	1	0	0	0	0	0	41.9	29
0100	0	0	0	0	2	8	6	1	0	2	0	0	0	0	0	42.6	13
0200	0	0	0	3	2	9	9	1	0	0	0	0	0	0	0	43.1	18
0300	0	0	1	2	0	6	10	9	5	1	0	0	0	0	0	48.4	30
0400	0	0	2	4	10	16	26	19	7	2	1	0	0	0	0	46.4	68
0500	0	0	4	10	29	54	86	47	18	3	0	0	0	0	0	46	187
0600	0	1	3	17	59	157	189	102	25	4	0	0	0	0	0	44.5	423
0700	0	2	11	25	79	243	216	92	21	1	2	0	0	0	0	43.3	475
0800	0	0	2	34	79	268	240	76	29	1	0	0	1	0	0	43.3	520
0900	1	3	6	16	60	179	161	55	10	3	0	2	0	0	0	42.6	352
1000	0	0	2	20	73	140	103	37	5	0	0	0	0	0	0	41.4	221
1100	0	0	6	18	75	152	92	25	9	0	0	0	0	0	0	40.7	202
1200	0	0	11	28	80	159	126	37	5	1	0	0	0	0	0	41.5	266
1300	0	0	11	10	55	169	129	42	12	2	0	0	0	0	0	42.6	302
1400	0	1	10	20	83	185	120	48	5	2	1	0	0	0	0	41.5	290
1500	0	1	16	34	63	182	156	49	5	2	0	0	0	0	0	42.2	328
1600	0	2	2	25	80	176	151	66	7	3	0	0	0	0	0	42.5	339
1700	3	0	2	24	56	205	149	69	23	2	0	0	0	0	0	42.9	374
1800	0	1	12	21	90	154	150	50	15	6	0	0	0	0	0	42.4	304
1900	0	0	3	22	60	160	98	33	12	4	2	1	1	0	0	41.7	246
2000	0	1	5	13	49	135	78	19	13	4	1	0	0	0	0	41.5	194
2100	0	0	1	12	29	80	59	20	1	0	0	1	0	0	0	42.1	130
2200	0	1	2	7	33	51	34	18	2	0	0	0	0	0	0	41.6	80
2300	0	0	0	5	8	27	24	4	3	1	0	0	0	0	0	42.8	48
00-00	4	13	113	375	1162	2929	2420	925	235	45	7	4	2	0	0	42.5	5439

Vehicles = 8234

Posted speed limit = 40 mph, Exceeding = 5439 (66.06%), Mean Exceeding = 46.52 mph

Maximum = 84.5 mph, Minimum = 9.9 mph, Mean = 42.6 mph

50% Speed = 42.50 mph, 85% Speed = 49.66 mph, Median = 42.50 mph

12 mph Pace = 37 - 49, Number in Pace = 5256 (63.83%)

Variance = 54.87, Standard Deviation = 7.41 mph

Tuesday, March 22, 2022

Time [--	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Vpp 50	JPSL 40
0000	0	0	1	4	11	20	11	6	2	0	0	0	0	0	0	40.8	30
0100	0	0	0	3	4	12	8	3	1	0	0	0	0	0	0	41.3	19
0200	0	0	0	1	1	7	5	1	2	1	0	0	0	0	0	43.8	15
0300	0	0	0	2	2	6	13	7	4	1	0	0	0	0	0	46.3	28
0400	0	0	2	4	4	16	34	19	3	1	0	0	0	0	0	46.8	65
0500	0	1	4	8	24	60	85	51	17	7	0	0	0	0	0	46	199
0600	0	1	5	19	52	165	178	81	17	2	1	0	0	0	0	44.1	386
0700	0	3	5	36	81	226	259	81	17	6	0	0	0	0	0	43.6	511
0800	0	1	9	30	55	244	232	69	25	4	1	0	0	0	0	43.4	484
0900	0	1	8	20	80	229	145	54	15	3	1	0	0	0	0	41.9	370
1000	0	0	4	14	74	156	109	40	8	0	0	0	0	0	0	41.7	254
1100	0	1	3	23	77	179	106	19	9	0	0	0	0	0	0	40.6	230
1200	0	0	5	21	78	172	115	37	9	4	1	0	1	0	0	41.8	267
1300	0	1	7	19	76	160	122	34	14	2	1	0	0	0	0	41.9	276
1400	0	1	9	19	78	199	118	41	10	1	0	0	0	0	0	41.3	287
1500	1	5	10	36	77	213	173	42	12	1	1	0	0	0	0	41.7	360
1600	0	2	10	22	72	199	150	50	7	0	0	0	0	0	0	42.4	322
1700	0	3	6	22	64	213	172	52	13	5	1	0	0	0	0	42.3	367
1800	0	0	9	26	80	181	144	38	13	1	1	1	0	0	0	41.8	315
1900	0	2	9	13	74	156	106	27	2	2	0	0	0	0	0	41.3	228
2000	0	0	2	14	56	130	67	18	3	2	0	0	0	0	0	40.3	156
2100	0	0	3	9	34	89	59	14	5	1	0	0	0	0	0	41.8	133
2200	0	1	1	9	25	76	33	13	2	1	0	0	0	0	0	41.2	96
2300	0	0	2	5	23	36	20	8	4	0	0	0	0	0	0	40.5	55
00-00	1	23	114	379	1202	3144	2464	805	214	45	8	1	1	0	0	42.3	5453

Vehicles = 8401

Posted speed limit = 40 mph, Exceeding = 5453 (64.91%), Mean Exceeding = 46.17 mph

Maximum = 82.6 mph, Minimum = 9.9 mph, Mean = 42.3 mph

50% Speed = 42.28 mph, 85% Speed = 48.99 mph, Median = 42.28 mph

12 mph Pace = 36 - 48, Number in Pace = 5528 (65.80%)

Variance = 51.71, Standard Deviation = 7.19 mph

Grand Total

Time [--	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Vpp 50	JPSL 40
--	5	36	227	754	2364	6073	4884	1730	449	90	15	5	3	0	0	42.4	10892

Vehicles = 16635

Posted speed limit = 40 mph, Exceeding = 10892 (65.48%), Mean Exceeding = 46.34 mph

Maximum = 84.5 mph, Minimum = 9.9 mph, Mean = 42.4 mph

50% Speed = 42.39 mph, 85% Speed = 49.32 mph, Median = 42.39 mph

12 mph Pace = 37 - 49, Number in Pace = 10763 (64.70%)

Variance = 53.29, Standard Deviation = 7.30 mph

Connor Speed Report

Dataset

Site Name SNOUFFER WB
 Direction West

Monday, March 21, 2022

Time [--	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Vpp 50	JPSL 40
0000	0	0	0	3	6	24	21	6	2	1	0	0	0	0	0	43.1	45
0100	0	0	1	0	8	3	12	5	4	0	0	0	0	0	0	45.7	23
0200	0	0	0	1	1	10	9	5	0	0	0	0	0	0	0	44.1	19
0300	0	0	0	1	3	4	5	5	0	3	0	0	0	0	0	46.2	14
0400	0	0	2	0	1	7	16	4	1	0	0	0	0	0	0	46.4	25
0500	0	0	1	2	11	30	32	26	4	0	0	0	0	0	0	45.5	85
0600	0	1	1	8	25	71	78	29	8	1	0	0	0	0	0	44.1	162
0700	0	5	15	19	54	101	91	30	9	1	0	0	0	0	0	41.7	194
0800	1	13	29	26	71	164	95	38	7	0	0	0	0	0	0	40.5	238
0900	0	5	22	23	56	159	114	15	5	0	0	0	0	0	0	41.5	233
1000	0	3	30	16	59	134	86	18	2	0	0	0	0	0	0	40.4	192
1100	1	5	22	30	62	148	110	32	7	0	0	0	0	0	0	41.4	247
1200	1	5	27	44	90	180	113	28	4	1	0	0	0	0	0	40.4	259
1300	1	12	26	30	61	183	124	27	8	1	0	0	0	0	0	41.2	265
1400	0	5	26	19	72	240	148	37	5	1	0	0	0	0	0	41.4	334
1500	0	7	26	51	111	255	170	48	8	1	1	0	0	0	0	41	381
1600	0	6	12	22	113	308	245	55	14	1	0	0	0	0	0	42.5	519
1700	0	4	17	45	167	340	251	67	13	3	0	0	0	0	0	41.3	529
1800	0	3	6	34	125	276	161	48	10	0	0	0	0	0	0	41.3	402
1900	0	0	6	16	80	237	133	43	10	2	0	0	0	0	0	41.5	328
2000	0	0	1	7	47	158	116	26	10	3	0	0	0	0	0	42.4	265
2100	0	2	0	3	28	110	93	29	3	1	0	0	0	0	0	43.2	197
2200	0	0	2	3	21	60	59	16	4	2	0	0	0	0	0	43.3	118
2300	0	0	0	2	14	45	44	7	8	3	0	0	0	0	0	43.6	88
00-00	4	76	272	405	1286	3247	2326	644	146	25	1	0	0	0	0	41.6	5162

Vehicles = 8432

Posted speed limit = 40 mph, Exceeding = 5162 (61.22%), Mean Exceeding = 45.59 mph

Maximum = 72.3 mph, Minimum = 11.0 mph, Mean = 41.1 mph

50% Speed = 41.61 mph, 85% Speed = 47.87 mph, Median = 41.61 mph

12 mph Pace = 36 - 48, Number in Pace = 5569 (66.05%)

Variance = 56.90, Standard Deviation = 7.54 mph

Tuesday, March 22, 2022

Time [--	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Vpp 50	JPSL 40
0000	0	0	0	3	9	27	19	12	2	2	0	0	1	0	0	43.3	54
0100	0	0	0	0	10	11	7	4	1	1	0	0	0	0	0	41.7	20
0200	0	0	0	0	2	9	8	3	2	0	0	0	0	0	0	44.1	18
0300	0	0	0	1	0	4	7	4	1	0	0	0	0	0	0	46.6	16
0400	0	0	1	1	1	6	11	4	1	0	0	0	0	0	0	45.6	20
0500	0	0	1	2	9	35	37	21	4	0	0	0	0	0	0	44.3	88
0600	1	1	4	12	24	61	84	36	5	2	0	0	0	0	0	44.1	170
0700	0	7	30	30	45	121	97	49	10	1	0	0	0	0	0	42.1	234
0800	1	9	20	19	46	146	112	47	8	0	0	0	0	0	0	41.9	254
0900	0	5	26	25	63	147	121	23	6	1	0	0	0	0	0	41.2	230
1000	0	1	31	19	54	129	88	26	4	0	0	0	0	0	0	41.1	207
1100	0	8	15	25	65	148	100	33	10	1	0	0	0	0	0	41.4	235
1200	0	4	33	37	58	181	123	29	3	2	1	0	0	0	0	41.3	275
1300	1	6	34	27	55	186	125	39	4	0	0	0	0	0	0	41.2	281
1400	0	4	17	36	81	208	153	45	10	3	0	0	0	0	0	41.7	335
1500	1	3	20	44	100	288	213	53	10	2	1	0	0	0	0	41.8	466
1600	0	5	17	26	120	293	238	67	13	2	0	0	0	0	0	41.9	488
1700	0	3	19	33	79	350	287	84	15	3	1	0	0	0	0	42.7	615
1800	1	5	7	38	135	333	188	49	12	2	1	0	0	0	0	40.8	449
1900	0	1	2	13	60	223	178	46	9	4	0	0	0	1	0	42.7	380
2000	0	0	1	8	56	151	113	33	13	1	0	1	0	0	0	42.6	252
2100	0	0	1	7	21	107	135	40	13	0	0	0	0	0	0	44.1	272
2200	0	1	0	1	20	64	67	27	3	0	1	0	0	0	0	43.8	141
2300	0	0	1	3	8	54	39	15	4	2	0	0	0	0	0	43.1	98
00-00	5	63	280	410	1121	3282	2550	789	163	29	5	1	1	1	0	42.2	5598

Vehicles = 8700

Posted speed limit = 40 mph, Exceeding = 5598 (64.34%), Mean Exceeding = 45.86 mph

Maximum = 91.4 mph, Minimum = 9.2 mph, Mean = 41.6 mph

50% Speed = 42.17 mph, 85% Speed = 48.54 mph, Median = 42.17 mph

12 mph Pace = 36 - 48, Number in Pace = 5760 (66.21%)

Variance = 58.72, Standard Deviation = 7.66 mph

Grand Total

Time [--	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Vpp 50	JPSL 40
--	9	139	552	815	2407	6529	4876	1433	309	54	6	1	1	1	0	41.9	10760

Vehicles = 17132

Posted speed limit = 40 mph, Exceeding = 10760 (62.81%), Mean Exceeding = 45.73 mph

Maximum = 91.4 mph, Minimum = 9.2 mph, Mean = 41.4 mph

50% Speed = 41.94 mph, 85% Speed = 48.21 mph, Median = 41.94 mph

12 mph Pace = 36 - 48, Number in Pace = 11329 (66.13%)

Variance = 57.89, Standard Deviation = 7.61 mph

Connor Speed Report

Dataset

Site Name SNOUFFER SCH.RD EB
 Direction East

Tuesday, March 22, 2022

Time [--]	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Vpp 50	JPSL 40
0000	0	0	1	4	11	20	11	6	2	0	0	0	0	0	0	40.8	30
0100	0	0	0	3	4	12	8	3	1	0	0	0	0	0	0	41.3	19
0200	0	0	0	1	1	7	5	1	2	1	0	0	0	0	0	43.8	15
0300	0	0	0	2	2	6	13	7	4	1	0	0	0	0	0	46.3	28
0400	0	0	2	4	4	16	34	19	3	1	0	0	0	0	0	46.8	65
0500	0	1	4	8	24	60	85	51	17	7	0	0	0	0	0	46	199
0600	0	1	5	19	52	165	178	81	17	2	1	0	0	0	0	44.1	386
0700	0	3	5	36	81	226	259	81	17	6	0	0	0	0	0	43.6	511
0800	0	1	9	30	55	244	232	69	25	4	1	0	0	0	0	43.4	484
0900	0	1	8	20	80	229	145	54	15	3	1	0	0	0	0	41.9	370
1000	0	0	4	14	74	156	109	40	8	0	0	0	0	0	0	41.7	254
1100	0	1	3	23	77	179	106	19	9	0	0	0	0	0	0	40.6	230
1200	0	0	5	21	78	172	115	37	9	4	1	0	1	0	0	41.8	267
1300	0	1	7	19	76	160	122	34	14	2	1	0	0	0	0	41.9	276
1400	0	1	9	19	78	199	118	41	10	1	0	0	0	0	0	41.3	287
1500	1	5	10	36	77	213	173	42	12	1	1	0	0	0	0	41.7	360
1600	0	2	10	22	72	199	150	50	7	0	0	0	0	0	0	42.4	322
1700	0	3	6	22	64	213	172	52	13	5	1	0	0	0	0	42.3	367
1800	0	0	9	26	80	181	144	38	13	1	1	1	0	0	0	41.8	315
1900	0	2	9	13	74	156	106	27	2	2	0	0	0	0	0	41.3	228
2000	0	0	2	14	56	130	67	18	3	2	0	0	0	0	0	40.3	156
2100	0	0	3	9	34	89	59	14	5	1	0	0	0	0	0	41.8	133
2200	0	1	1	9	25	76	33	13	2	1	0	0	0	0	0	41.2	96
2300	0	0	2	5	23	36	20	8	4	0	0	0	0	0	0	40.5	55
00-00	1	23	114	379	1202	3144	2464	805	214	45	8	1	1	0	0	42.3	5453

Vehicles = 8401

Posted speed limit = 40 mph, Exceeding = 5453 (64.91%), Mean Exceeding = 46.17 mph

Maximum = 82.6 mph, Minimum = 9.9 mph, Mean = 42.3 mph

50% Speed = 42.28 mph, 85% Speed = 48.99 mph, Median = 42.28 mph

12 mph Pace = 36 - 48, Number in Pace = 5528 (65.80%)

Variance = 51.71, Standard Deviation = 7.19 mph

Wednesday, March 23, 2022

Time [--	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Vpp 50	JPSL 40
0000	0	1	0	2	13	26	5	2	5	0	0	0	0	0	0	39.1	21
0100	0	0	1	2	7	10	8	0	0	0	0	0	0	0	0	40.3	15
0200	0	0	1	1	4	6	9	3	1	0	0	0	0	0	0	43.5	16
0300	0	0	2	3	5	8	14	5	3	0	0	0	0	0	0	45.3	27
0400	0	0	2	8	10	18	25	14	7	0	0	0	0	0	0	44.4	61
0500	0	1	3	10	21	71	81	40	10	3	0	0	0	0	0	44.3	188
0600	0	2	3	29	62	163	187	61	12	1	0	0	0	0	0	43.5	359
0700	0	1	7	17	74	281	235	78	11	4	1	0	0	0	0	42.8	501
0800	0	0	11	17	104	247	231	61	23	6	0	0	0	0	0	42.9	481
0900	0	0	3	28	73	191	144	38	7	3	0	0	0	0	0	41.8	303
1000	0	2	1	19	65	162	112	27	4	1	0	0	0	0	0	42.2	244
1100	0	1	7	21	75	149	106	31	8	0	0	0	0	0	0	41.2	224
1200	0	1	10	20	106	196	86	18	3	0	0	0	0	0	0	39.9	215
1300	0	1	7	31	96	165	115	22	2	1	0	0	0	0	0	39.8	216
1400	1	3	6	22	87	172	109	30	11	0	0	0	0	0	0	40.8	249
1500	0	3	14	29	82	184	126	34	3	0	0	0	0	0	0	41.4	283
1600	0	1	5	22	91	180	128	34	7	2	0	1	0	0	0	41.3	278
1700	0	0	6	14	86	245	127	39	7	4	0	0	1	0	0	41.2	316
1800	0	1	9	34	75	188	90	21	1	1	0	0	0	0	0	40.3	223
1900	0	1	9	19	67	131	85	8	4	0	0	0	0	0	0	40.5	172
2000	0	1	2	7	68	138	54	13	3	0	0	0	0	0	0	39.9	141
2100	0	0	6	10	69	92	43	8	2	0	0	0	0	0	0	39	97
2200	0	0	3	8	34	42	18	6	2	0	0	0	0	0	0	39.7	53
2300	0	0	2	5	24	35	25	2	0	0	0	0	0	0	0	38.7	40
00-00	1	20	120	378	1398	3100	2163	595	136	26	1	1	1	0	0	41.4	4723

Vehicles = 7940

Posted speed limit = 40 mph, Exceeding = 4723 (59.48%), Mean Exceeding = 45.66 mph

Maximum = 86.0 mph, Minimum = 10.4 mph, Mean = 41.4 mph

50% Speed = 41.38 mph, 85% Speed = 47.97 mph, Median = 41.38 mph

12 mph Pace = 36 - 48, Number in Pace = 5286 (66.57%)

Variance = 47.88, Standard Deviation = 6.92 mph

Grand Total

Time [--	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Vpp 50	JPSL 40
--	2	43	234	757	2600	6244	4627	1400	350	71	9	2	2	0	0	41.8	10176

Vehicles = 16341

Posted speed limit = 40 mph, Exceeding = 10176 (62.27%), Mean Exceeding = 45.93 mph

Maximum = 86.0 mph, Minimum = 9.9 mph, Mean = 41.8 mph

50% Speed = 41.83 mph, 85% Speed = 48.43 mph, Median = 41.83 mph

12 mph Pace = 36 - 48, Number in Pace = 10812 (66.16%)

Variance = 50.05, Standard Deviation = 7.07 mph

Connor Speed Report

Dataset

Site Name SNOUFFER SCH.RD EB
 Direction East

Monday, March 21, 2022

Time [--	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Vpp 50	JPSL 40
0000	0	0	1	5	8	14	8	6	3	1	0	0	0	0	0	41.9	29
0100	0	0	0	0	2	8	6	1	0	2	0	0	0	0	0	42.6	13
0200	0	0	0	3	2	9	9	1	0	0	0	0	0	0	0	43.1	18
0300	0	0	1	2	0	6	10	9	5	1	0	0	0	0	0	48.4	30
0400	0	0	2	4	10	16	26	19	7	2	1	0	0	0	0	46.4	68
0500	0	0	4	10	29	54	86	47	18	3	0	0	0	0	0	46	187
0600	0	1	3	17	59	157	189	102	25	4	0	0	0	0	0	44.5	423
0700	0	2	11	25	79	243	216	92	21	1	2	0	0	0	0	43.3	475
0800	0	0	2	34	79	268	240	76	29	1	0	0	1	0	0	43.3	520
0900	1	3	6	16	60	179	161	55	10	3	0	2	0	0	0	42.6	352
1000	0	0	2	20	73	140	103	37	5	0	0	0	0	0	0	41.4	221
1100	0	0	6	18	75	152	92	25	9	0	0	0	0	0	0	40.7	202
1200	0	0	11	28	80	159	126	37	5	1	0	0	0	0	0	41.5	266
1300	0	0	11	10	55	169	129	42	12	2	0	0	0	0	0	42.6	302
1400	0	1	10	20	83	185	120	48	5	2	1	0	0	0	0	41.5	290
1500	0	1	16	34	63	182	156	49	5	2	0	0	0	0	0	42.2	328
1600	0	2	2	25	80	176	151	66	7	3	0	0	0	0	0	42.5	339
1700	3	0	2	24	56	205	149	69	23	2	0	0	0	0	0	42.9	374
1800	0	1	12	21	90	154	150	50	15	6	0	0	0	0	0	42.4	304
1900	0	0	3	22	60	160	98	33	12	4	2	1	1	0	0	41.7	246
2000	0	1	5	13	49	135	78	19	13	4	1	0	0	0	0	41.5	194
2100	0	0	1	12	29	80	59	20	1	0	0	1	0	0	0	42.1	130
2200	0	1	2	7	33	51	34	18	2	0	0	0	0	0	0	41.6	80
2300	0	0	0	5	8	27	24	4	3	1	0	0	0	0	0	42.8	48
00-00	4	13	113	375	1162	2929	2420	925	235	45	7	4	2	0	0	42.5	5439

Vehicles = 8234

Posted speed limit = 40 mph, Exceeding = 5439 (66.06%), Mean Exceeding = 46.52 mph

Maximum = 84.5 mph, Minimum = 9.9 mph, Mean = 42.6 mph

50% Speed = 42.50 mph, 85% Speed = 49.66 mph, Median = 42.50 mph

12 mph Pace = 37 - 49, Number in Pace = 5256 (63.83%)

Variance = 54.87, Standard Deviation = 7.41 mph

Tuesday, March 22, 2022

Time [--]	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Vpp 50	JPSL 40
0000	0	0	1	4	11	20	11	6	2	0	0	0	0	0	0	40.8	30
0100	0	0	0	3	4	12	8	3	1	0	0	0	0	0	0	41.3	19
0200	0	0	0	1	1	7	5	1	2	1	0	0	0	0	0	43.8	15
0300	0	0	0	2	2	6	13	7	4	1	0	0	0	0	0	46.3	28
0400	0	0	2	4	4	16	34	19	3	1	0	0	0	0	0	46.8	65
0500	0	1	4	8	24	60	85	51	17	7	0	0	0	0	0	46	199
0600	0	1	5	19	52	165	178	81	17	2	1	0	0	0	0	44.1	386
0700	0	3	5	36	81	226	259	81	17	6	0	0	0	0	0	43.6	511
0800	0	1	9	30	55	244	232	69	25	4	1	0	0	0	0	43.4	484
0900	0	1	8	20	80	229	145	54	15	3	1	0	0	0	0	41.9	370
1000	0	0	4	14	74	156	109	40	8	0	0	0	0	0	0	41.7	254
1100	0	1	3	23	77	179	106	19	9	0	0	0	0	0	0	40.6	230
1200	0	0	5	21	78	172	115	37	9	4	1	0	1	0	0	41.8	267
1300	0	1	7	19	76	160	122	34	14	2	1	0	0	0	0	41.9	276
1400	0	1	9	19	78	199	118	41	10	1	0	0	0	0	0	41.3	287
1500	1	5	10	36	77	213	173	42	12	1	1	0	0	0	0	41.7	360
1600	0	2	10	22	72	199	150	50	7	0	0	0	0	0	0	42.4	322
1700	0	3	6	22	64	213	172	52	13	5	1	0	0	0	0	42.3	367
1800	0	0	9	26	80	181	144	38	13	1	1	1	0	0	0	41.8	315
1900	0	2	9	13	74	156	106	27	2	2	0	0	0	0	0	41.3	228
2000	0	0	2	14	56	130	67	18	3	2	0	0	0	0	0	40.3	156
2100	0	0	3	9	34	89	59	14	5	1	0	0	0	0	0	41.8	133
2200	0	1	1	9	25	76	33	13	2	1	0	0	0	0	0	41.2	96
2300	0	0	2	5	23	36	20	8	4	0	0	0	0	0	0	40.5	55
00-00	1	23	114	379	1202	3144	2464	805	214	45	8	1	1	0	0	42.3	5453

Vehicles = 8401

Posted speed limit = 40 mph, Exceeding = 5453 (64.91%), Mean Exceeding = 46.17 mph

Maximum = 82.6 mph, Minimum = 9.9 mph, Mean = 42.3 mph

50% Speed = 42.28 mph, 85% Speed = 48.99 mph, Median = 42.28 mph

12 mph Pace = 36 - 48, Number in Pace = 5528 (65.80%)

Variance = 51.71, Standard Deviation = 7.19 mph

Grand Total

Time [--]	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Vpp 50	JPSL 40
--	5	36	227	754	2364	6073	4884	1730	449	90	15	5	3	0	0	42.4	10892

Vehicles = 16635

Posted speed limit = 40 mph, Exceeding = 10892 (65.48%), Mean Exceeding = 46.34 mph

Maximum = 84.5 mph, Minimum = 9.9 mph, Mean = 42.4 mph

50% Speed = 42.39 mph, 85% Speed = 49.32 mph, Median = 42.39 mph

12 mph Pace = 37 - 49, Number in Pace = 10763 (64.70%)

Variance = 53.29, Standard Deviation = 7.30 mph

Connor Speed Report

Dataset

Site Name SNOUFFER WB
 Direction West

Tuesday, March 22, 2022

Time [--	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Vpp 50	JPSL 40
0000	0	0	0	3	9	27	19	12	2	2	0	0	1	0	0	43.3	54
0100	0	0	0	0	10	11	7	4	1	1	0	0	0	0	0	41.7	20
0200	0	0	0	0	2	9	8	3	2	0	0	0	0	0	0	44.1	18
0300	0	0	0	1	0	4	7	4	1	0	0	0	0	0	0	46.6	16
0400	0	0	1	1	1	6	11	4	1	0	0	0	0	0	0	45.6	20
0500	0	0	1	2	9	35	37	21	4	0	0	0	0	0	0	44.3	88
0600	1	1	4	12	24	61	84	36	5	2	0	0	0	0	0	44.1	170
0700	0	7	30	30	45	121	97	49	10	1	0	0	0	0	0	42.1	234
0800	1	9	20	19	46	146	112	47	8	0	0	0	0	0	0	41.9	254
0900	0	5	26	25	63	147	121	23	6	1	0	0	0	0	0	41.2	230
1000	0	1	31	19	54	129	88	26	4	0	0	0	0	0	0	41.1	207
1100	0	8	15	25	65	148	100	33	10	1	0	0	0	0	0	41.4	235
1200	0	4	33	37	58	181	123	29	3	2	1	0	0	0	0	41.3	275
1300	1	6	34	27	55	186	125	39	4	0	0	0	0	0	0	41.2	281
1400	0	4	17	36	81	208	153	45	10	3	0	0	0	0	0	41.7	335
1500	1	3	20	44	100	288	213	53	10	2	1	0	0	0	0	41.8	466
1600	0	5	17	26	120	293	238	67	13	2	0	0	0	0	0	41.9	488
1700	0	3	19	33	79	350	287	84	15	3	1	0	0	0	0	42.7	615
1800	1	5	7	38	135	333	188	49	12	2	1	0	0	0	0	40.8	449
1900	0	1	2	13	60	223	178	46	9	4	0	0	0	1	0	42.7	380
2000	0	0	1	8	56	151	113	33	13	1	0	1	0	0	0	42.6	252
2100	0	0	1	7	21	107	135	40	13	0	0	0	0	0	0	44.1	272
2200	0	1	0	1	20	64	67	27	3	0	1	0	0	0	0	43.8	141
2300	0	0	1	3	8	54	39	15	4	2	0	0	0	0	0	43.1	98
00-00	5	63	280	410	1121	3282	2550	789	163	29	5	1	1	1	0	42.2	5598

Vehicles = 8700

Posted speed limit = 40 mph, Exceeding = 5598 (64.34%), Mean Exceeding = 45.86 mph

Maximum = 91.4 mph, Minimum = 9.2 mph, Mean = 41.6 mph

50% Speed = 42.17 mph, 85% Speed = 48.54 mph, Median = 42.17 mph

12 mph Pace = 36 - 48, Number in Pace = 5760 (66.21%)

Variance = 58.72, Standard Deviation = 7.66 mph

Wednesday, March 23, 2022

Time [--	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Vpp 50	JPSL 40
0000	0	1	1	1	11	21	27	10	8	0	0	0	0	0	0	44.3	59
0100	0	0	0	0	4	8	9	3	2	0	0	0	0	0	0	44.4	18
0200	0	0	0	0	3	7	6	2	2	0	0	0	0	0	0	43.5	16
0300	0	0	0	1	4	2	6	1	0	0	0	0	0	0	0	43.4	9
0400	0	0	2	0	4	11	6	4	1	0	0	0	0	0	0	41.2	16
0500	0	0	0	2	4	19	48	27	15	0	0	0	0	0	0	47.1	105
0600	0	2	2	4	17	65	68	25	8	2	0	0	0	0	0	44.2	145
0700	1	6	24	19	35	111	89	28	3	3	0	0	0	0	0	41.5	188
0800	1	8	19	24	55	147	128	40	5	2	0	0	0	0	0	41.8	265
0900	0	4	20	21	49	141	102	34	6	0	0	0	0	0	0	41.8	231
1000	1	3	25	23	49	125	121	31	2	1	0	1	0	0	0	41.7	226
1100	1	3	18	22	52	146	132	36	3	0	0	0	0	0	0	42.3	267
1200	0	1	14	27	95	168	127	28	5	0	0	0	0	0	0	41	255
1300	0	1	18	37	93	203	124	18	4	2	0	0	0	0	0	40.6	272
1400	0	3	4	25	80	218	138	33	8	0	1	0	0	0	0	41.6	313
1500	0	1	19	17	67	273	204	57	5	1	0	0	0	0	0	42.6	442
1600	1	6	16	35	117	302	230	61	13	2	0	0	0	0	0	41.9	503
1700	0	4	14	36	118	289	235	66	5	2	1	0	0	0	0	41.8	478
1800	0	0	5	34	127	278	152	42	1	1	0	0	0	0	0	41	362
1900	0	0	0	9	73	206	85	24	3	0	0	0	0	0	0	40.6	217
2000	0	0	4	7	64	142	76	36	6	0	0	0	0	0	0	41.5	202
2100	0	0	2	6	49	138	55	13	4	2	0	0	0	0	0	40.7	156
2200	0	0	0	2	25	91	65	14	1	1	0	0	0	0	0	42.2	138
2300	0	0	0	5	14	48	32	12	5	0	0	0	0	0	0	42.9	81
00-00	5	43	207	357	1209	3159	2265	645	115	19	2	1	0	0	0	41.8	4964

Vehicles = 8027

Posted speed limit = 40 mph, Exceeding = 4964 (61.84%), Mean Exceeding = 45.59 mph

Maximum = 76.0 mph, Minimum = 10.1 mph, Mean = 41.4 mph

50% Speed = 41.83 mph, 85% Speed = 48.09 mph, Median = 41.83 mph

12 mph Pace = 36 - 48, Number in Pace = 5413 (67.43%)

Variance = 51.65, Standard Deviation = 7.19 mph

Grand Total

Time [--	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Vpp 50	JPSL 40
--	10	106	487	767	2330	6441	4815	1434	278	48	7	2	1	1	0	41.9	10562

Vehicles = 16727

Posted speed limit = 40 mph, Exceeding = 10562 (63.14%), Mean Exceeding = 45.73 mph

Maximum = 91.4 mph, Minimum = 9.2 mph, Mean = 41.5 mph

50% Speed = 41.94 mph, 85% Speed = 48.32 mph, Median = 41.94 mph

12 mph Pace = 36 - 48, Number in Pace = 11166 (66.75%)

Variance = 55.33, Standard Deviation = 7.44 mph

Connor Speed Report

Dataset

Site Name SNOUFFER WB
Direction West

Monday, March 21, 2022

Time [--	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Vpp 50	JPSL 40
0000	0	0	0	3	6	24	21	6	2	1	0	0	0	0	0	43.1	45
0100	0	0	1	0	8	3	12	5	4	0	0	0	0	0	0	45.7	23
0200	0	0	0	1	1	10	9	5	0	0	0	0	0	0	0	44.1	19
0300	0	0	0	1	3	4	5	5	0	3	0	0	0	0	0	46.2	14
0400	0	0	2	0	1	7	16	4	1	0	0	0	0	0	0	46.4	25
0500	0	0	1	2	11	30	32	26	4	0	0	0	0	0	0	45.5	85
0600	0	1	1	8	25	71	78	29	8	1	0	0	0	0	0	44.1	162
0700	0	5	15	19	54	101	91	30	9	1	0	0	0	0	0	41.7	194
0800	1	13	29	26	71	164	95	38	7	0	0	0	0	0	0	40.5	238
0900	0	5	22	23	56	159	114	15	5	0	0	0	0	0	0	41.5	233
1000	0	3	30	16	59	134	86	18	2	0	0	0	0	0	0	40.4	192
1100	1	5	22	30	62	148	110	32	7	0	0	0	0	0	0	41.4	247
1200	1	5	27	44	90	180	113	28	4	1	0	0	0	0	0	40.4	259
1300	1	12	26	30	61	183	124	27	8	1	0	0	0	0	0	41.2	265
1400	0	5	26	19	72	240	148	37	5	1	0	0	0	0	0	41.4	334
1500	0	7	26	51	111	255	170	48	8	1	1	0	0	0	0	41	381
1600	0	6	12	22	113	308	245	55	14	1	0	0	0	0	0	42.5	519
1700	0	4	17	45	167	340	251	67	13	3	0	0	0	0	0	41.3	529
1800	0	3	6	34	125	276	161	48	10	0	0	0	0	0	0	41.3	402
1900	0	0	6	16	80	237	133	43	10	2	0	0	0	0	0	41.5	328
2000	0	0	1	7	47	158	116	26	10	3	0	0	0	0	0	42.4	265
2100	0	2	0	3	28	110	93	29	3	1	0	0	0	0	0	43.2	197
2200	0	0	2	3	21	60	59	16	4	2	0	0	0	0	0	43.3	118
2300	0	0	0	2	14	45	44	7	8	3	0	0	0	0	0	43.6	88
00-00	4	76	272	405	1286	3247	2326	644	146	25	1	0	0	0	0	41.6	5162

Vehicles = 8432

Posted speed limit = 40 mph, Exceeding = 5162 (61.22%), Mean Exceeding = 45.59 mph

Maximum = 72.3 mph, Minimum = 11.0 mph, Mean = 41.1 mph

50% Speed = 41.61 mph, 85% Speed = 47.87 mph, Median = 41.61 mph

12 mph Pace = 36 - 48, Number in Pace = 5569 (66.05%)

Variance = 56.90, Standard Deviation = 7.54 mph

Tuesday, March 22, 2022

Time [--	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Vpp 50	JPSL 40
0000	0	0	0	3	9	27	19	12	2	2	0	0	1	0	0	43.3	54
0100	0	0	0	0	10	11	7	4	1	1	0	0	0	0	0	41.7	20
0200	0	0	0	0	2	9	8	3	2	0	0	0	0	0	0	44.1	18
0300	0	0	0	1	0	4	7	4	1	0	0	0	0	0	0	46.6	16
0400	0	0	1	1	1	6	11	4	1	0	0	0	0	0	0	45.6	20
0500	0	0	1	2	9	35	37	21	4	0	0	0	0	0	0	44.3	88
0600	1	1	4	12	24	61	84	36	5	2	0	0	0	0	0	44.1	170
0700	0	7	30	30	45	121	97	49	10	1	0	0	0	0	0	42.1	234
0800	1	9	20	19	46	146	112	47	8	0	0	0	0	0	0	41.9	254
0900	0	5	26	25	63	147	121	23	6	1	0	0	0	0	0	41.2	230
1000	0	1	31	19	54	129	88	26	4	0	0	0	0	0	0	41.1	207
1100	0	8	15	25	65	148	100	33	10	1	0	0	0	0	0	41.4	235
1200	0	4	33	37	58	181	123	29	3	2	1	0	0	0	0	41.3	275
1300	1	6	34	27	55	186	125	39	4	0	0	0	0	0	0	41.2	281
1400	0	4	17	36	81	208	153	45	10	3	0	0	0	0	0	41.7	335
1500	1	3	20	44	100	288	213	53	10	2	1	0	0	0	0	41.8	466
1600	0	5	17	26	120	293	238	67	13	2	0	0	0	0	0	41.9	488
1700	0	3	19	33	79	350	287	84	15	3	1	0	0	0	0	42.7	615
1800	1	5	7	38	135	333	188	49	12	2	1	0	0	0	0	40.8	449
1900	0	1	2	13	60	223	178	46	9	4	0	0	0	1	0	42.7	380
2000	0	0	1	8	56	151	113	33	13	1	0	1	0	0	0	42.6	252
2100	0	0	1	7	21	107	135	40	13	0	0	0	0	0	0	44.1	272
2200	0	1	0	1	20	64	67	27	3	0	1	0	0	0	0	43.8	141
2300	0	0	1	3	8	54	39	15	4	2	0	0	0	0	0	43.1	98
00-00	5	63	280	410	1121	3282	2550	789	163	29	5	1	1	1	0	42.2	5598

Vehicles = 8700

Posted speed limit = 40 mph, Exceeding = 5598 (64.34%), Mean Exceeding = 45.86 mph

Maximum = 91.4 mph, Minimum = 9.2 mph, Mean = 41.6 mph

50% Speed = 42.17 mph, 85% Speed = 48.54 mph, Median = 42.17 mph

12 mph Pace = 36 - 48, Number in Pace = 5760 (66.21%)

Variance = 58.72, Standard Deviation = 7.66 mph

Grand Total

Time [--	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Vpp 50	JPSL 40
--	9	139	552	815	2407	6529	4876	1433	309	54	6	1	1	1	0	41.9	10760

Vehicles = 17132

Posted speed limit = 40 mph, Exceeding = 10760 (62.81%), Mean Exceeding = 45.73 mph

Maximum = 91.4 mph, Minimum = 9.2 mph, Mean = 41.4 mph

50% Speed = 41.94 mph, 85% Speed = 48.21 mph, Median = 41.94 mph

12 mph Pace = 36 - 48, Number in Pace = 11329 (66.13%)

Variance = 57.89, Standard Deviation = 7.61 mph

Connor Speed Report

Dataset

Site Name SNOUFFER WB
Direction West

Tuesday, March 22, 2022

Time [--	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Vpp 50	JPSL 40
0000	0	0	0	3	9	27	19	12	2	2	0	0	1	0	0	43.3	54
0100	0	0	0	0	10	11	7	4	1	1	0	0	0	0	0	41.7	20
0200	0	0	0	0	2	9	8	3	2	0	0	0	0	0	0	44.1	18
0300	0	0	0	1	0	4	7	4	1	0	0	0	0	0	0	46.6	16
0400	0	0	1	1	1	6	11	4	1	0	0	0	0	0	0	45.6	20
0500	0	0	1	2	9	35	37	21	4	0	0	0	0	0	0	44.3	88
0600	1	1	4	12	24	61	84	36	5	2	0	0	0	0	0	44.1	170
0700	0	7	30	30	45	121	97	49	10	1	0	0	0	0	0	42.1	234
0800	1	9	20	19	46	146	112	47	8	0	0	0	0	0	0	41.9	254
0900	0	5	26	25	63	147	121	23	6	1	0	0	0	0	0	41.2	230
1000	0	1	31	19	54	129	88	26	4	0	0	0	0	0	0	41.1	207
1100	0	8	15	25	65	148	100	33	10	1	0	0	0	0	0	41.4	235
1200	0	4	33	37	58	181	123	29	3	2	1	0	0	0	0	41.3	275
1300	1	6	34	27	55	186	125	39	4	0	0	0	0	0	0	41.2	281
1400	0	4	17	36	81	208	153	45	10	3	0	0	0	0	0	41.7	335
1500	1	3	20	44	100	288	213	53	10	2	1	0	0	0	0	41.8	466
1600	0	5	17	26	120	293	238	67	13	2	0	0	0	0	0	41.9	488
1700	0	3	19	33	79	350	287	84	15	3	1	0	0	0	0	42.7	615
1800	1	5	7	38	135	333	188	49	12	2	1	0	0	0	0	40.8	449
1900	0	1	2	13	60	223	178	46	9	4	0	0	0	1	0	42.7	380
2000	0	0	1	8	56	151	113	33	13	1	0	1	0	0	0	42.6	252
2100	0	0	1	7	21	107	135	40	13	0	0	0	0	0	0	44.1	272
2200	0	1	0	1	20	64	67	27	3	0	1	0	0	0	0	43.8	141
2300	0	0	1	3	8	54	39	15	4	2	0	0	0	0	0	43.1	98
00-00	5	63	280	410	1121	3282	2550	789	163	29	5	1	1	1	0	42.2	5598

Vehicles = 8700

Posted speed limit = 40 mph, Exceeding = 5598 (64.34%), Mean Exceeding = 45.86 mph

Maximum = 91.4 mph, Minimum = 9.2 mph, Mean = 41.6 mph

50% Speed = 42.17 mph, 85% Speed = 48.54 mph, Median = 42.17 mph

12 mph Pace = 36 - 48, Number in Pace = 5760 (66.21%)

Variance = 58.72, Standard Deviation = 7.66 mph

Wednesday, March 23, 2022

Time [--]	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Vpp 50	JPSL 40
0000	0	1	1	1	11	21	27	10	8	0	0	0	0	0	0	44.3	59
0100	0	0	0	0	4	8	9	3	2	0	0	0	0	0	0	44.4	18
0200	0	0	0	0	3	7	6	2	2	0	0	0	0	0	0	43.5	16
0300	0	0	0	1	4	2	6	1	0	0	0	0	0	0	0	43.4	9
0400	0	0	2	0	4	11	6	4	1	0	0	0	0	0	0	41.2	16
0500	0	0	0	2	4	19	48	27	15	0	0	0	0	0	0	47.1	105
0600	0	2	2	4	17	65	68	25	8	2	0	0	0	0	0	44.2	145
0700	1	6	24	19	35	111	89	28	3	3	0	0	0	0	0	41.5	188
0800	1	8	19	24	55	147	128	40	5	2	0	0	0	0	0	41.8	265
0900	0	4	20	21	49	141	102	34	6	0	0	0	0	0	0	41.8	231
1000	1	3	25	23	49	125	121	31	2	1	0	1	0	0	0	41.7	226
1100	1	3	18	22	52	146	132	36	3	0	0	0	0	0	0	42.3	267
1200	0	1	14	27	95	168	127	28	5	0	0	0	0	0	0	41	255
1300	0	1	18	37	93	203	124	18	4	2	0	0	0	0	0	40.6	272
1400	0	3	4	25	80	218	138	33	8	0	1	0	0	0	0	41.6	313
1500	0	1	19	17	67	273	204	57	5	1	0	0	0	0	0	42.6	442
1600	1	6	16	35	117	302	230	61	13	2	0	0	0	0	0	41.9	503
1700	0	4	14	36	118	289	235	66	5	2	1	0	0	0	0	41.8	478
1800	0	0	5	34	127	278	152	42	1	1	0	0	0	0	0	41	362
1900	0	0	0	9	73	206	85	24	3	0	0	0	0	0	0	40.6	217
2000	0	0	4	7	64	142	76	36	6	0	0	0	0	0	0	41.5	202
2100	0	0	2	6	49	138	55	13	4	2	0	0	0	0	0	40.7	156
2200	0	0	0	2	25	91	65	14	1	1	0	0	0	0	0	42.2	138
2300	0	0	0	5	14	48	32	12	5	0	0	0	0	0	0	42.9	81
00-00	5	43	207	357	1209	3159	2265	645	115	19	2	1	0	0	0	41.8	4964

Vehicles = 8027

Posted speed limit = 40 mph, Exceeding = 4964 (61.84%), Mean Exceeding = 45.59 mph

Maximum = 76.0 mph, Minimum = 10.1 mph, Mean = 41.4 mph

50% Speed = 41.83 mph, 85% Speed = 48.09 mph, Median = 41.83 mph

12 mph Pace = 36 - 48, Number in Pace = 5413 (67.43%)

Variance = 51.65, Standard Deviation = 7.19 mph

Grand Total

Time [--]	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Vpp 50	JPSL 40
--	10	106	487	767	2330	6441	4815	1434	278	48	7	2	1	1	0	41.9	10562

Vehicles = 16727

Posted speed limit = 40 mph, Exceeding = 10562 (63.14%), Mean Exceeding = 45.73 mph

Maximum = 91.4 mph, Minimum = 9.2 mph, Mean = 41.5 mph

50% Speed = 41.94 mph, 85% Speed = 48.32 mph, Median = 41.94 mph

12 mph Pace = 36 - 48, Number in Pace = 11166 (66.75%)

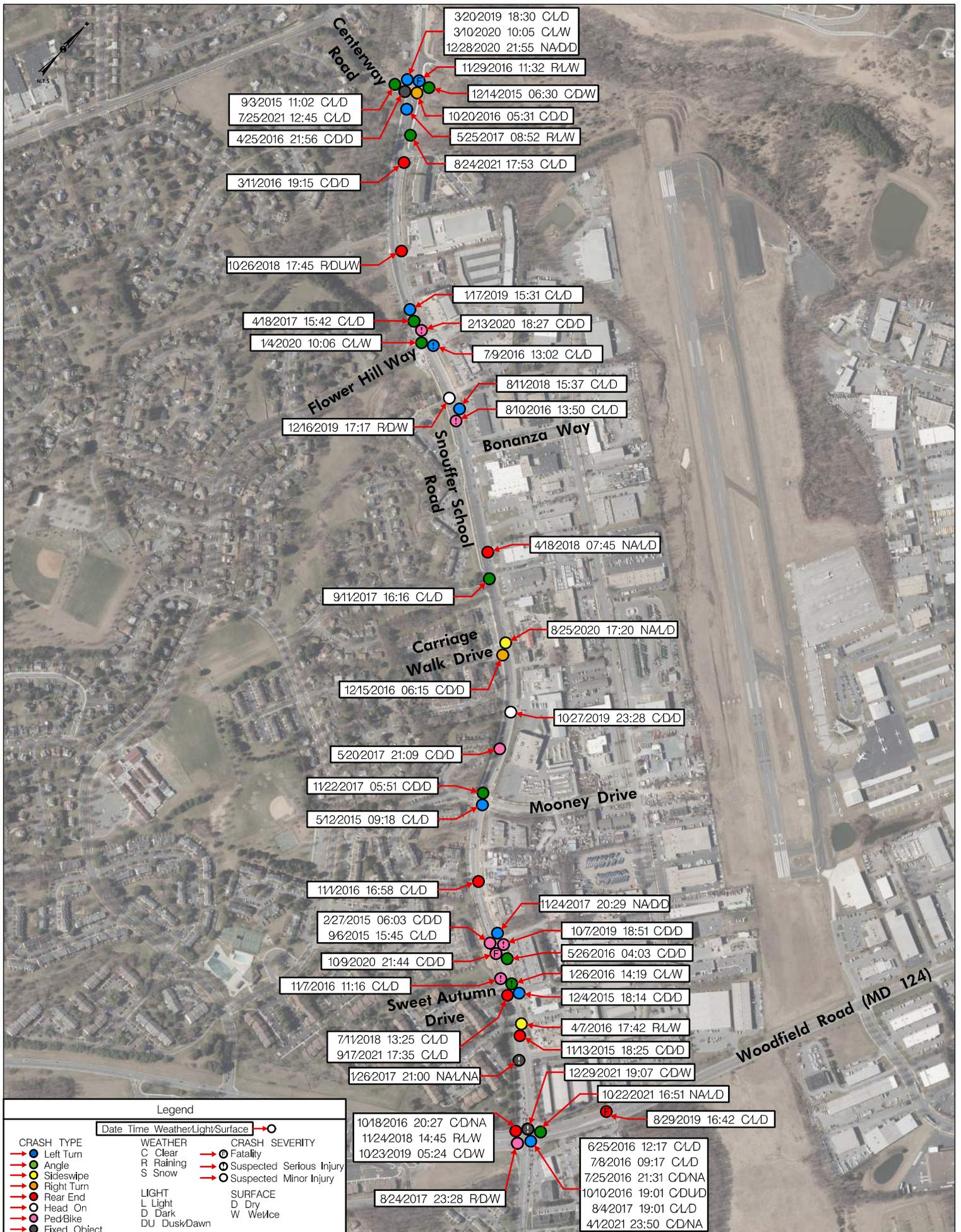
Variance = 55.33, Standard Deviation = 7.44 mph

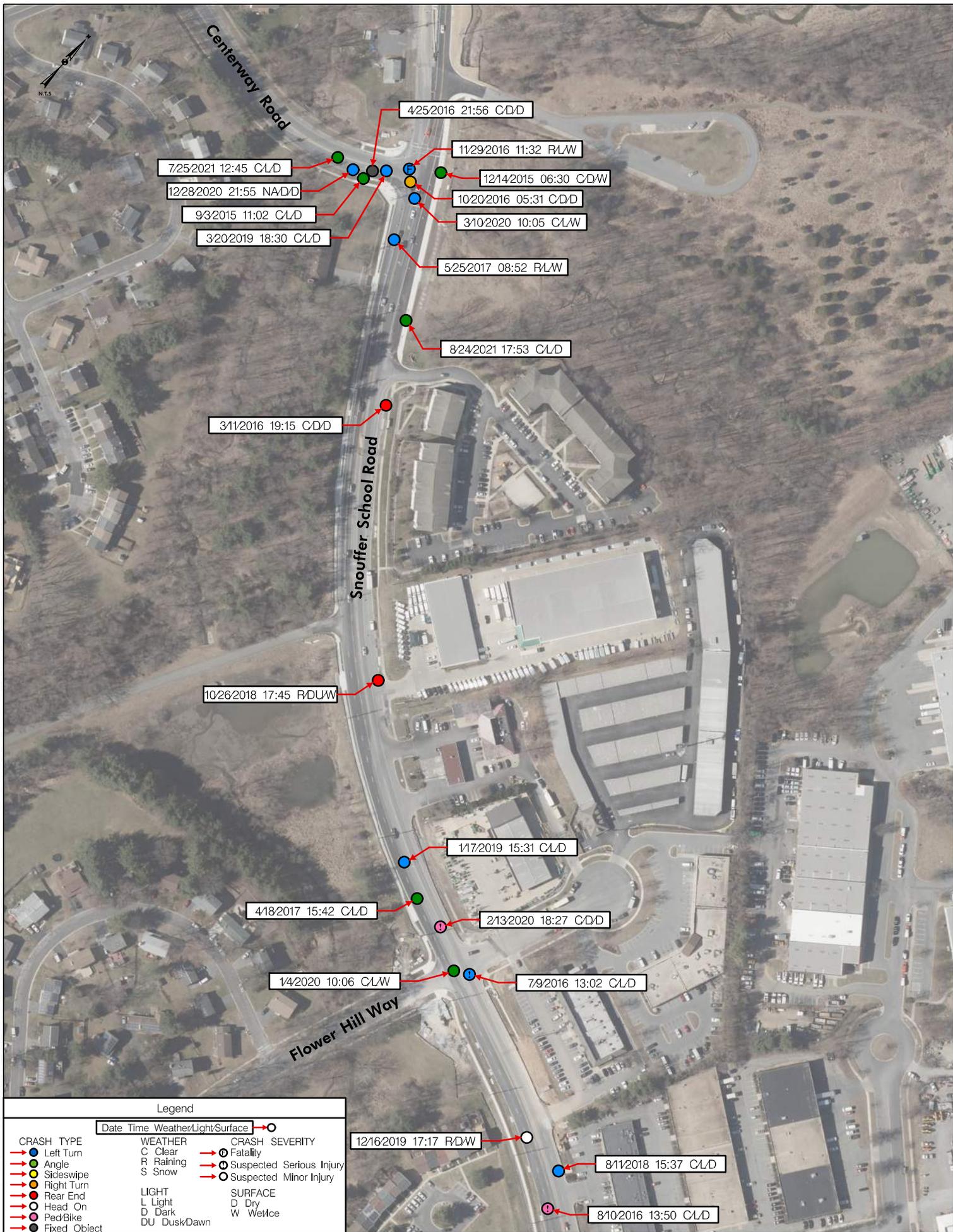
APPENDIX

C

HIN Fatal, Serious Injury, and Minor Injury Crash Data Materials

CRASH DIAGRAM (2015-2021)







Bonanza Way

Snuffer School Road

4/18/2018 07:45 NALD

9/11/2017 16:16 CLD

8/25/2020 17:20 NALD

Carriage Walk Drive

12/15/2016 06:15 CDD

10/27/2019 23:28 CDD

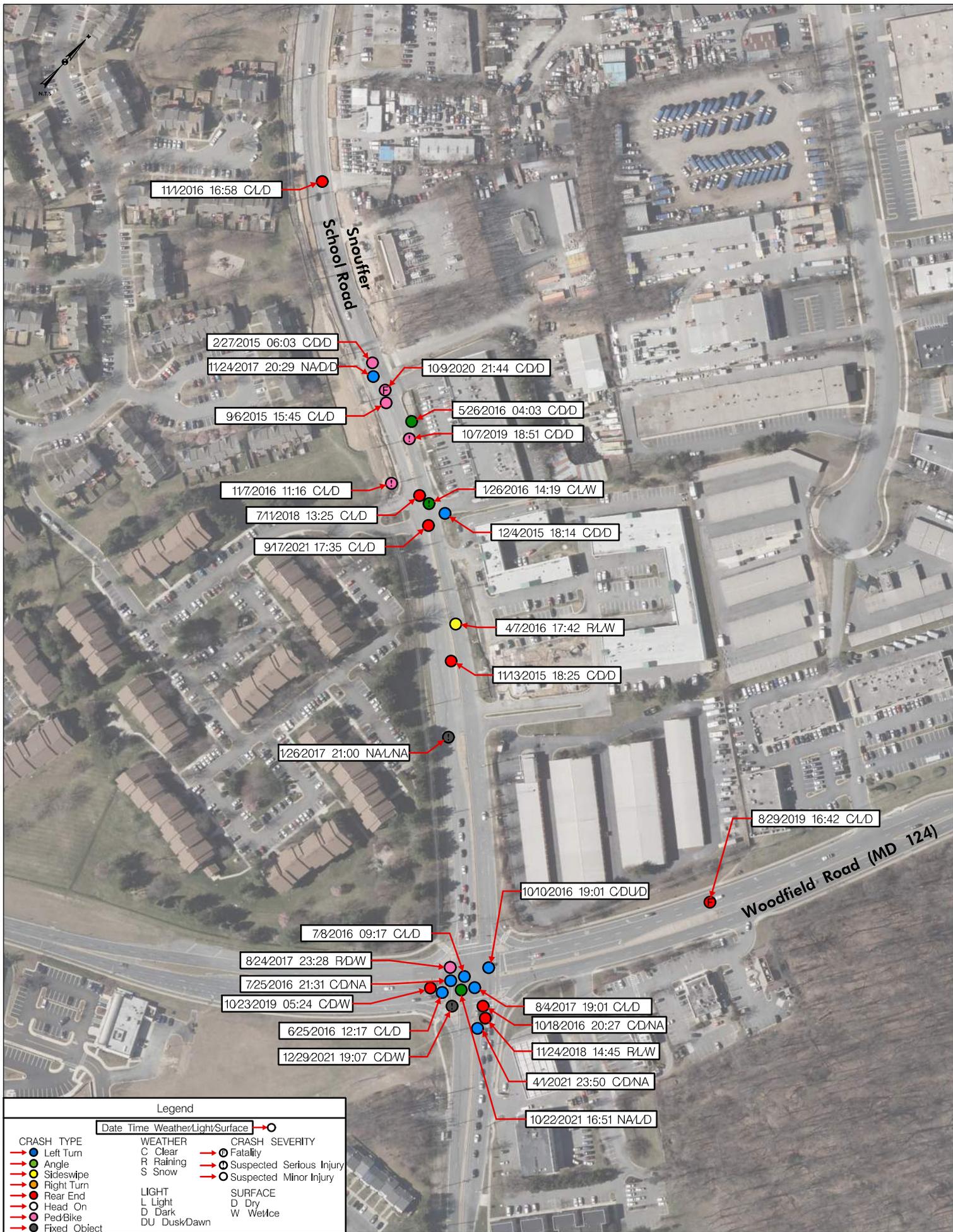
5/20/2017 21:09 CDD

11/22/2017 05:51 CDD

Mooney Drive

5/12/2015 09:18 CLD

Legend			
CRASH TYPE	Date Time Weather/Light/Surface	CRASH SEVERITY	
Left Turn	WEATHER	Fatality	
Angle	C Clear	Suspected Serious Injury	
Sideswipe	R Raining	Suspected Minor Injury	
Right Turn	S Snow		
Rear End	LIGHT		
Head On	L Light	SURFACE	
Ped/Bike	D Dark	D Dry	
Fixed Object	DU Dusk/Dawn	W Wet/Ice	



APPENDIX

D

Photographs

Five crashes occurred under dark conditions when the lights were on at this intersection. (Table 9, Issue 1.1)



High Injury Network (HIN) Report: Snouffer School Road

Figure D1

Location 1: Snouffer School Road at Centerway Road



Minor spalling was noted on east side of Snouffer School Road near Centerway Road. (Table 9, Issue 2.1)



There is no marked crosswalk across the Corrigan Square Apartments access driveway. (Table 9, Issue 2.2)



The pedestrian ramps and DWSs at the Corrigan Square Apartments driveway are oriented toward the travel lanes of Snouffer School Road, rather than across the driveway. (Table 9, Issue 2.3)



No pedestrian crossing warning sign on WB Snouffer School Road. (Table 9, Issue 2.4)



High Injury Network (HIN) Report: Snouffer School Road

Figure D2

Location 2: Snouffer School Road between Centerway Road and Flower Hill Way



Pedestrians crossing at the midblock crosswalk east of Centerway Road are subject to vehicles that travel in excess of the speed limit and are subject to a multilane threat from vehicles. (Table 9, Issue 2.5)



There is no marked crosswalk across the Nike Missile Park entrance along EB Snouffer School Road. (Table 9, Issue 2.6)



High Injury Network (HIN) Report: Snouffer School Road

Figure D3

Location 2: Snouffer School Road between Centerway Road and Flower Hill Way



There are no marked crosswalks across the Flower Hill Road or Earhart Court intersection legs. (Table 9, Issue 3.1)



Additional sidewalk spalling noted near Earhart Court. (Table 9, Issue 3.2)



The right turn restriction sign along EB Snouffer School, in advance of Flower Hill Way, is damaged. (Table 9, Issue 3.3)



High Injury Network (HIN) Report: Snouffer School Road

Figure D4

Location 3: Snouffer School Road at Flower Hill Road/Earhart Court



The pedestrian ramps and DWSs in the NE and NW corners of the intersection (for crossing Earhart Court) are oriented toward the travel lanes of Snouffer School Road, rather than across Earhart Court. Also, the curb radii are large, resulting in a longer crossing distance for pedestrians. (Table 9, Issue 3.4)



The Snouffer School Road at Flower Hill Way/Earhart Court intersection is unsignalized yet has moderate levels of traffic into and out of Flower Hill Way/Earhart Court, bus stop 26100 and 26084 along eastbound and westbound Snouffer School Road, and there is no protected crossing of Snouffer School Road nearby. (Table 9, Issue 3.5)



High Injury Network (HIN) Report: Snouffer School Road

Figure D5

Location 3: Snouffer School Road at Flower Hill Road/Earhart Court



There is no marked crosswalk across the Airpark Place Shopping Center Driveway along WB Snouffer School Road. (Table 9, Issue 4.1)



The existing sidewalk at bus stop 26102 along EB Snouffer School Road, just east of Bonanza Way, appears to be higher in elevation than the top of the curb. (Table 9, Issue 4.2)



There are no marked crosswalks across the north and south legs of the intersection (crossing Bonanza Way). (Table 9, Issue 4.3)



The pedestrian ramps and DWSs in the NE and NW corners of the intersection (for crossing Bonanza Way) are oriented toward the travel lanes of Snouffer School Road, rather than across Bonanza Way. (Table 9, Issue 4.4)



High Injury Network (HIN) Report: Snouffer School Road

Figure D6

Location 4: Snouffer School Road at Bonanza Way



Vehicles were observed parking along SB Bonanza Way within the right turn lane, and in areas that are signed as No Parking. (Table 9, Issue 4.5)



High Injury Network (HIN) Report: Snouffer School Road

Figure D7

Location 4: Snouffer School Road at Bonanza Way



Sidewalk spalling was noted north of Mallory Place. (Table 9, Issue 5.1)



There is no marked crosswalk across the Mallory Place intersection leg along EB Snouffer School Road. (Table 9, Issue 5.2)



Stop bar is not adjacent to the stop sign at Mallory Place. (Table 9, Issue 5.3)



High Injury Network (HIN) Report: Snouffer School Road

Figure D8

Location 5: Snouffer School Road between Bonanza Way and Carriage Walk Drive



In the SE and SW corners, the curb radii are large, resulting in a longer crossing distance for pedestrians. (Table 9, Issue 5.4)



Pedestrians crossing at the midblock crosswalk west of Carriage Walk Drive are subject to vehicles that travel in excess of the speed limit and are subject to a multilane threat from vehicles. (Table 9, Issue 5.5)



High Injury Network (HIN) Report: Snouffer School Road

Figure D9

Location 6: Snouffer School Road at Carriage Walk Drive



There is no marked crosswalk across the Carriage Walk Drive intersection leg along EB Snouffer School Road. (Table 9, Issue 6.1)



High Injury Network (HIN) Report: Snouffer School Road

Figure D10

Location 6: Snouffer School Road at Carriage Walk Drive



There is no marked crosswalk across the TW Perry Driveway intersection leg along WB Snouffer School Road. (Table 9, Issue 7.1)



There are no DWSs on the pedestrian refuge island on the TW Perry Driveway intersection leg, along WB Snouffer School Road. (Table 9, Issue 7.2)



High Injury Network (HIN) Report: Snouffer School Road

Figure D11

Location 7: Snouffer School Road between Carriage Walk Drive and Cherry Laurel Lane



There are no intersection lights present in the SW corner of the intersection. (Table 9, Issue 8.1)



High Injury Network (HIN) Report: Snouffer School Road

Figure D12

Location 8: Snouffer School Road at Cherry Laurel Lane/Mooney Drive



There are no streetlights present in the SW corner of the intersection (where a future marked crosswalk for the west leg of the Snouffer School Road/Sweet Autumn Drive signalized intersection will be located). (Table 9, Issue 9.1)



High Injury Network (HIN) Report: Snouffer School Road

Figure D13

Location 9: Snouffer School Road at Sweet Autumn Drive



Sight distance is partially obscured between right turning vehicles and pedestrians crossing the channelized right turn lanes in the NW corner of the intersection. (Table 9, Issue 10.1).



Sight distance is partially obscured between right turning vehicles and pedestrians crossing the channelized right turn lanes in the SW corner of the intersection. (Table 9, Issue 10.1).



Sight distance is partially obscured between right turning vehicles and pedestrians crossing the channelized right turn lanes in the SE corner of the intersection. (Table 9, Issue 10.1).



High Injury Network (HIN) Report: Snouffer School Road

Figure D14

Location 10: Snouffer School Road at MD 124 (Woodfield Road)



The north leg median on MD 124 extends into the crosswalk (for crossing MD 124). (Table 9, Issue 10.2).



The pedestrian signals in NE and SE corners of the intersection are very dim/difficult to see and are outdated. There are no Accessible Pedestrian Signals (APS) on any approaches. (Table 9, Issue 10.3).



Existing crosswalk markings are faded and/or are not to standard across all intersection legs. (Table 9, Issue 10.4).



High Injury Network (HIN) Report: Snouffer School Road

Figure D15

Location 10: Snouffer School Road at MD 124 (Woodfield Road)



Lane and arrow pavement markings are fading or faded on all approaches of the intersection. There are no left turn lane arrow markings on the EB and WB intersection approach turn lanes. (Table 9, Issue 10.5).



Lane markings along WB Snouffer Road between MD 124 and the east driveway to the Horizon Center Shopping Center are fading or faded. (Table 9, Issue 10.6).



No intersection lighting is present at the intersection, and existing corridor lights do not appear to adequately cover the marked crosswalks in the intersection. (Table 9, Issue 10.7).



Sediment, debris, and plant growth are present on all right turn channelization islands in the intersection. (Table 9, Issue 10.8).



High Injury Network (HIN) Report: Snouffer School Road

Figure D16

Location 10: Snouffer School Road at MD 124 (Woodfield Road)



APPENDIX

E

Intersection Synchro/SimTraffic Analysis
Results

HCM 6th Signalized Intersection Summary
 1: Snouffer School Rd & Centerway Rd

SNouffer School Rd PRSA
 Existing No-Build



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	65	334	205	339	643	78
Future Volume (veh/h)	65	334	205	339	643	78
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1870	1922	1875	1938	1938
Adj Flow Rate, veh/h	75	384	228	377	663	80
Peak Hour Factor	0.87	0.87	0.90	0.90	0.97	0.97
Percent Heavy Veh, %	4	2	5	8	4	4
Cap, veh/h	333	414	533	2441	1848	223
Arrive On Green	0.19	0.19	0.07	0.69	0.56	0.56
Sat Flow, veh/h	1753	1585	1830	3657	3405	399
Grp Volume(v), veh/h	75	384	228	377	369	374
Grp Sat Flow(s),veh/h/ln	1753	1585	1830	1781	1841	1866
Q Serve(g_s), s	3.6	19.0	5.0	3.7	11.1	11.1
Cycle Q Clear(g_c), s	3.6	19.0	5.0	3.7	11.1	11.1
Prop In Lane	1.00	1.00	1.00			0.21
Lane Grp Cap(c), veh/h	333	414	533	2441	1028	1042
V/C Ratio(X)	0.23	0.93	0.43	0.15	0.36	0.36
Avail Cap(c_a), veh/h	333	414	576	2441	1028	1042
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.3	36.0	8.2	5.5	12.2	12.2
Incr Delay (d2), s/veh	0.3	26.8	0.5	0.1	1.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	21.6	1.7	1.2	4.4	4.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	34.6	62.8	8.8	5.7	13.2	13.2
LnGrp LOS	C	E	A	A	B	B
Approach Vol, veh/h				605	743	
Approach Delay, s/veh				58.2	6.9	13.2
Approach LOS				E	A	B
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		75.0		25.0	12.6	62.4
Change Period (Y+Rc), s		6.5		6.0	5.5	6.5
Max Green Setting (Gmax), s		68.5		19.0	9.5	53.5
Max Q Clear Time (g_c+I1), s		5.7		21.0	7.0	13.1
Green Ext Time (p_c), s		18.7		0.0	0.2	28.9

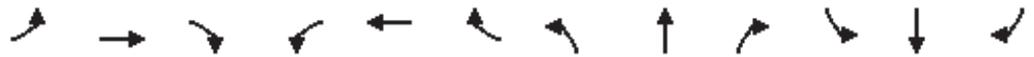
Intersection Summary		
HCM 6th Ctrl Delay		22.5
HCM 6th LOS		C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
 5: Snouffer School Rd & Cherry Laurel Ln/Mooney Dr

SNouffer School Rd PRSA
 Existing No-Build



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗		↖	↕		↖	↕	
Traffic Volume (veh/h)	75	3	7	8	0	28	7	468	90	17	927	10
Future Volume (veh/h)	75	3	7	8	0	28	7	468	90	17	927	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1604	1870	1870	1875	1891	1891	1953	1922	1922
Adj Flow Rate, veh/h	95	4	9	11	0	37	7	498	96	19	1019	11
Peak Hour Factor	0.79	0.79	0.79	0.75	0.75	0.75	0.94	0.94	0.94	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	20	2	2	8	7	7	3	5	5
Cap, veh/h	166	8	11	212	0	175	450	2178	418	672	2923	32
Arrive On Green	0.11	0.11	0.11	0.11	0.00	0.11	0.72	0.72	0.72	0.02	0.79	0.79
Sat Flow, veh/h	994	72	97	1201	0	1585	549	3007	577	1860	3701	40
Grp Volume(v), veh/h	108	0	0	11	0	37	7	297	297	19	503	527
Grp Sat Flow(s),veh/h/ln	1163	0	0	1201	0	1585	549	1796	1787	1860	1826	1915
Q Serve(g_s), s	8.8	0.0	0.0	0.0	0.0	2.6	0.4	6.5	6.6	0.3	9.6	9.6
Cycle Q Clear(g_c), s	11.3	0.0	0.0	0.8	0.0	2.6	2.2	6.5	6.6	0.3	9.6	9.6
Prop In Lane	0.88		0.08	1.00		1.00	1.00		0.32	1.00		0.02
Lane Grp Cap(c), veh/h	185	0	0	212	0	175	450	1301	1295	672	1442	1512
V/C Ratio(X)	0.59	0.00	0.00	0.05	0.00	0.21	0.02	0.23	0.23	0.03	0.35	0.35
Avail Cap(c_a), veh/h	363	0	0	365	0	376	450	1301	1295	798	1442	1512
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.6	0.0	0.0	47.9	0.0	48.6	5.1	5.5	5.5	3.8	3.7	3.7
Incr Delay (d2), s/veh	2.9	0.0	0.0	0.1	0.0	0.6	0.1	0.4	0.4	0.0	0.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	0.0	0.3	0.0	1.1	0.1	2.2	2.2	0.1	2.8	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.5	0.0	0.0	48.0	0.0	49.2	5.2	5.9	5.9	3.8	4.3	4.3
LnGrp LOS	E	A	A	D	A	D	A	A	A	A	A	A
Approach Vol, veh/h		108			48			601			1049	
Approach Delay, s/veh		56.5			49.0			5.9			4.3	
Approach LOS		E			D			A			A	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	7.8	93.4		18.7		101.3		18.7				
Change Period (Y+Rc), s	5.5	6.5		5.5		6.5		5.5				
Max Green Setting (Gmax), s	10.5	63.5		28.5		79.5		28.5				
Max Q Clear Time (g_c+I1), s	2.3	8.6		13.3		11.6		4.6				
Green Ext Time (p_c), s	0.0	0.5		0.2		0.8		0.1				

Intersection Summary												
HCM 6th Ctrl Delay				9.1								
HCM 6th LOS				A								

HCM Signalized Intersection Capacity Analysis

7: Woodfield Rd & Snouffer School Rd

06/20/2022

													
Movement	NBL	NBT	NBR	SBU	SBL	SBT	SBR	SEU	SEL	SET	SER	NWU	
Lane Configurations													
Traffic Volume (vph)	102	387	136	1	169	383	156	1	193	602	204	1	
Future Volume (vph)	102	387	136	1	169	383	156	1	193	602	204	1	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	2000	2000	2000	1900	
Total Lost time (s)	6.5	6.5	6.5		6.5	6.5	6.5		7.5	6.5	6.5		
Lane Util. Factor	1.00	0.95	1.00		0.91	0.91	1.00		1.00	0.95	1.00		
Frt	1.00	1.00	0.85		1.00	1.00	0.85		1.00	1.00	0.85		
Flt Protected	0.95	1.00	1.00		0.95	0.99	1.00		0.95	1.00	1.00		
Satd. Flow (prot)	1770	3539	1583		1610	3370	1583		1863	3725	1667		
Flt Permitted	0.95	1.00	1.00		0.50	0.99	1.00		0.32	1.00	1.00		
Satd. Flow (perm)	1770	3539	1583		842	3370	1583		631	3725	1667		
Peak-hour factor, PHF	0.88	0.88	0.88	0.86	0.86	0.86	0.86	0.92	0.92	0.92	0.92	0.85	
Adj. Flow (vph)	116	440	155	1	197	445	181	1	210	654	222	1	
RTOR Reduction (vph)	0	0	132	0	0	0	142	0	0	0	139	0	
Lane Group Flow (vph)	116	440	23	0	139	504	39	0	211	654	83	0	
Turn Type	Split	NA	Perm	Perm	Split	NA	Perm	pm+pt	pm+pt	NA	Perm	pm+pt	
Protected Phases	3	3			4	4		1	1	6		5	
Permitted Phases			3	4			4	6	6		6	2	
Actuated Green, G (s)	22.7	22.7	22.7		32.4	32.4	32.4		71.0	55.9	55.9		
Effective Green, g (s)	22.7	22.7	22.7		32.4	32.4	32.4		71.0	55.9	55.9		
Actuated g/C Ratio	0.15	0.15	0.15		0.22	0.22	0.22		0.47	0.37	0.37		
Clearance Time (s)	6.5	6.5	6.5		6.5	6.5	6.5		7.5	6.5	6.5		
Vehicle Extension (s)	4.0	4.0	4.0		4.0	4.0	4.0		3.0	0.2	0.2		
Lane Grp Cap (vph)	267	535	239		181	727	341		422	1388	621		
v/s Ratio Prot	0.07	c0.12				0.15			c0.05	0.18			
v/s Ratio Perm			0.01		c0.17	0.02			c0.19		0.05		
v/c Ratio	0.43	0.82	0.10		0.77	0.69	0.11		0.50	0.47	0.13		
Uniform Delay, d1	57.8	61.7	54.8		55.3	54.2	47.3		24.5	35.8	31.1		
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		
Incremental Delay, d2	1.5	10.3	0.2		18.6	3.1	0.2		0.9	1.1	0.4		
Delay (s)	59.4	72.0	55.1		73.8	57.3	47.5		25.4	37.0	31.5		
Level of Service	E	E	E		E	E	D		C	D	C		
Approach Delay (s)		66.3				57.9				33.6			
Approach LOS		E				E				C			
Intersection Summary													
HCM 2000 Control Delay			47.0									HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.64										
Actuated Cycle Length (s)			150.0									Sum of lost time (s)	27.0
Intersection Capacity Utilization			67.3%									ICU Level of Service	C
Analysis Period (min)			15										

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 7: Woodfield Rd & Snouffer School Rd

06/20/2022



Movement	NWL	NWT	NWR
Lane Configurations			
Traffic Volume (vph)	146	336	136
Future Volume (vph)	146	336	136
Ideal Flow (vphpl)	2000	2000	2000
Total Lost time (s)	7.5	6.5	
Lane Util. Factor	1.00	0.95	
Frt	1.00	0.96	
Flt Protected	0.95	1.00	
Satd. Flow (prot)	1863	3564	
Flt Permitted	0.31	1.00	
Satd. Flow (perm)	601	3564	
Peak-hour factor, PHF	0.85	0.85	0.85
Adj. Flow (vph)	172	395	160
RTOR Reduction (vph)	0	25	0
Lane Group Flow (vph)	173	530	0
Turn Type	pm+pt	NA	
Protected Phases	5	2	
Permitted Phases	2		
Actuated Green, G (s)	64.8	52.8	
Effective Green, g (s)	64.8	52.8	
Actuated g/C Ratio	0.43	0.35	
Clearance Time (s)	7.5	6.5	
Vehicle Extension (s)	3.0	0.2	
Lane Grp Cap (vph)	360	1254	
v/s Ratio Prot	0.04	0.15	
v/s Ratio Perm	0.17		
v/c Ratio	0.48	0.42	
Uniform Delay, d1	27.4	37.0	
Progression Factor	1.00	1.00	
Incremental Delay, d2	1.0	1.0	
Delay (s)	28.4	38.0	
Level of Service	C	D	
Approach Delay (s)		35.7	
Approach LOS		D	
Intersection Summary			

HCM 6th Signalized Intersection Summary
 1: Snouffer School Rd & Centerway Rd

Snouffer School Rd PSAR
 Existing



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	72	336	409	657	437	75
Future Volume (veh/h)	72	336	409	657	437	75
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1969	1969	1969	1969
Adj Flow Rate, veh/h	82	382	454	730	560	96
Peak Hour Factor	0.88	0.88	0.90	0.90	0.78	0.78
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	338	468	625	2562	1709	292
Arrive On Green	0.19	0.19	0.10	0.69	0.54	0.54
Sat Flow, veh/h	1781	1585	1875	3839	3293	546
Grp Volume(v), veh/h	82	382	454	730	327	329
Grp Sat Flow(s),veh/h/ln	1781	1585	1875	1870	1870	1871
Q Serve(g_s), s	3.9	19.0	10.5	7.6	9.9	9.9
Cycle Q Clear(g_c), s	3.9	19.0	10.5	7.6	9.9	9.9
Prop In Lane	1.00	1.00	1.00			0.29
Lane Grp Cap(c), veh/h	338	468	625	2562	1001	1001
V/C Ratio(X)	0.24	0.82	0.73	0.28	0.33	0.33
Avail Cap(c_a), veh/h	338	468	625	2562	1001	1001
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.4	32.7	9.5	6.2	13.1	13.1
Incr Delay (d2), s/veh	0.4	10.8	4.2	0.3	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	19.5	4.3	2.5	4.0	4.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	34.8	43.6	13.7	6.4	14.0	14.0
LnGrp LOS	C	D	B	A	B	B
Approach Vol, veh/h	464			1184	656	
Approach Delay, s/veh	42.0			9.2	14.0	
Approach LOS	D			A	B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		75.0		25.0	15.0	60.0
Change Period (Y+Rc), s		6.5		6.0	4.5	6.5
Max Green Setting (Gmax), s		68.5		19.0	10.5	53.5
Max Q Clear Time (g_c+I1), s		9.6		21.0	12.5	11.9
Green Ext Time (p_c), s		37.7		0.0	0.0	26.5

Intersection Summary

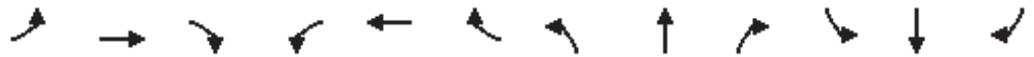
HCM 6th Ctrl Delay	17.2
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
 5: Snouffer School Rd & Cherry Laurel Ln/Mooney Dr

Snouffer School Rd PSAR
 Existing



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗		↖	↕		↖	↕	
Traffic Volume (veh/h)	94	1	39	7	2	19	28	850	62	19	663	11
Future Volume (veh/h)	94	1	39	7	2	19	28	850	62	19	663	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1969	1969	1969	1969	1969	1969
Adj Flow Rate, veh/h	125	1	52	10	3	28	30	914	67	23	809	13
Peak Hour Factor	0.75	0.75	0.75	0.68	0.68	0.68	0.93	0.93	0.93	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	190	4	59	264	24	225	533	2393	175	443	2808	45
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.68	0.68	0.68	0.02	0.75	0.75
Sat Flow, veh/h	899	24	381	1350	156	1453	701	3534	259	1875	3768	61
Grp Volume(v), veh/h	178	0	0	10	0	31	30	484	497	23	402	420
Grp Sat Flow(s),veh/h/ln	1304	0	0	1350	0	1609	701	1870	1922	1875	1870	1958
Q Serve(g_s), s	14.3	0.0	0.0	0.0	0.0	2.0	1.7	13.5	13.5	0.4	8.4	8.4
Cycle Q Clear(g_c), s	16.3	0.0	0.0	0.8	0.0	2.0	1.9	13.5	13.5	0.4	8.4	8.4
Prop In Lane	0.70		0.29	1.00		0.90	1.00		0.13	1.00		0.03
Lane Grp Cap(c), veh/h	253	0	0	264	0	249	533	1267	1302	443	1394	1459
V/C Ratio(X)	0.70	0.00	0.00	0.04	0.00	0.12	0.06	0.38	0.38	0.05	0.29	0.29
Avail Cap(c_a), veh/h	312	0	0	320	0	315	533	1267	1302	565	1394	1459
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.6	0.0	0.0	43.2	0.0	43.7	6.6	8.4	8.4	5.9	5.0	5.0
Incr Delay (d2), s/veh	5.3	0.0	0.0	0.1	0.0	0.2	0.2	0.9	0.9	0.0	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	0.0	0.0	0.3	0.0	0.8	0.3	5.2	5.3	0.1	2.8	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.9	0.0	0.0	43.3	0.0	43.9	6.8	9.3	9.3	6.0	5.5	5.5
LnGrp LOS	E	A	A	D	A	D	A	A	A	A	A	A
Approach Vol, veh/h		178			41			1011			845	
Approach Delay, s/veh		55.9			43.8			9.2			5.5	
Approach LOS		E			D			A			A	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	8.2	87.8		24.1		95.9		24.1				
Change Period (Y+Rc), s	5.5	6.5		5.5		6.5		5.5				
Max Green Setting (Gmax), s	10.5	68.5		23.5		84.5		23.5				
Max Q Clear Time (g_c+I1), s	2.4	15.5		18.3		10.4		4.0				
Green Ext Time (p_c), s	0.0	0.9		0.2		0.6		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		12.4
HCM 6th LOS		B

HCM Signalized Intersection Capacity Analysis

7: Woodfield Rd & Snouffer School Rd

06/20/2022

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEU	SEL	SET	SER	NWU	NWL
Lane Configurations												
Traffic Volume (vph)	173	478	128	135	519	275	1	170	404	160	4	149
Future Volume (vph)	173	478	128	135	519	275	1	170	404	160	4	149
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	2000	2000	1900	2000
Total Lost time (s)	6.5	6.5	6.5	6.5	6.5	6.5		7.5	6.5	6.5		7.5
Lane Util. Factor	1.00	0.95	1.00	0.91	0.91	1.00		1.00	0.95	1.00		1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	1.00	0.85		1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00	1.00		0.95
Satd. Flow (prot)	1770	3539	1583	1610	3386	1583		1863	3725	1667		1863
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.24	1.00	1.00		0.41
Satd. Flow (perm)	1770	3539	1583	1610	3386	1583		466	3725	1667		807
Peak-hour factor, PHF	0.90	0.90	0.90	0.95	0.95	0.95	0.86	0.86	0.86	0.86	0.96	0.96
Adj. Flow (vph)	192	531	142	142	546	289	1	198	470	186	4	155
RTOR Reduction (vph)	0	0	114	0	0	238	0	0	0	118	0	0
Lane Group Flow (vph)	192	531	28	128	560	51	0	199	470	68	0	159
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt
Protected Phases	3	3		4	4		1	1	6		5	5
Permitted Phases			3			4	6	6		6	2	2
Actuated Green, G (s)	30.1	30.1	30.1	26.5	26.5	26.5		67.2	54.6	54.6		65.6
Effective Green, g (s)	30.1	30.1	30.1	26.5	26.5	26.5		67.2	54.6	54.6		65.6
Actuated g/C Ratio	0.20	0.20	0.20	0.18	0.18	0.18		0.45	0.36	0.36		0.44
Clearance Time (s)	6.5	6.5	6.5	6.5	6.5	6.5		7.5	6.5	6.5		7.5
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0	4.0		3.0	0.2	0.2		3.0
Lane Grp Cap (vph)	355	710	317	284	598	279		326	1355	606		436
v/s Ratio Prot	0.11	c0.15		0.08	c0.17			c0.05	0.13			0.03
v/s Ratio Perm			0.02			0.03		c0.22		0.04		0.13
v/c Ratio	0.54	0.75	0.09	0.45	0.94	0.18		0.61	0.35	0.11		0.36
Uniform Delay, d1	53.8	56.4	48.8	55.2	60.9	52.5		27.4	34.7	31.6		26.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Incremental Delay, d2	2.1	4.6	0.2	1.6	22.4	0.4		3.4	0.7	0.4		0.5
Delay (s)	55.9	61.0	49.0	56.8	83.3	53.0		30.8	35.4	32.0		26.7
Level of Service	E	E	D	E	F	D		C	D	C		C
Approach Delay (s)		57.9			70.9				33.6			
Approach LOS		E			E				C			
Intersection Summary												
HCM 2000 Control Delay			50.6				HCM 2000 Level of Service			D		
HCM 2000 Volume to Capacity ratio			0.72									
Actuated Cycle Length (s)			150.0				Sum of lost time (s)			27.0		
Intersection Capacity Utilization			80.5%				ICU Level of Service			D		
Analysis Period (min)			15									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
7: Woodfield Rd & Snouffer School Rd

06/20/2022



Movement	NWT	NWR
Lane Configurations	↑↑	
Traffic Volume (vph)	566	129
Future Volume (vph)	566	129
Ideal Flow (vphpl)	2000	2000
Total Lost time (s)	6.5	
Lane Util. Factor	0.95	
Frt	0.97	
Flt Protected	1.00	
Satd. Flow (prot)	3622	
Flt Permitted	1.00	
Satd. Flow (perm)	3622	
Peak-hour factor, PHF	0.96	0.96
Adj. Flow (vph)	590	134
RTOR Reduction (vph)	12	0
Lane Group Flow (vph)	712	0
Turn Type	NA	
Protected Phases	2	
Permitted Phases		
Actuated Green, G (s)	53.8	
Effective Green, g (s)	53.8	
Actuated g/C Ratio	0.36	
Clearance Time (s)	6.5	
Vehicle Extension (s)	0.2	
Lane Grp Cap (vph)	1299	
v/s Ratio Prot	0.20	
v/s Ratio Perm		
v/c Ratio	0.55	
Uniform Delay, d1	38.4	
Progression Factor	1.00	
Incremental Delay, d2	1.7	
Delay (s)	40.1	
Level of Service	D	
Approach Delay (s)	37.7	
Approach LOS	D	
Intersection Summary		

HCM 6th Signalized Intersection Summary
 1: Snouffer School Rd & Centerway Rd

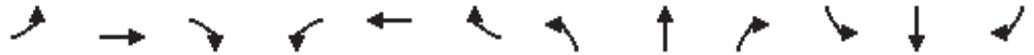
Snouffer School Rd PRSA
 Existing Build



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	65	334	205	339	643	78
Future Volume (veh/h)	65	334	205	339	643	78
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1870	1922	1875	1938	1938
Adj Flow Rate, veh/h	75	384	228	377	663	80
Peak Hour Factor	0.87	0.87	0.90	0.90	0.97	0.97
Percent Heavy Veh, %	4	2	5	8	4	4
Cap, veh/h	382	577	267	2346	1515	183
Arrive On Green	0.22	0.22	0.15	0.66	0.46	0.46
Sat Flow, veh/h	1753	1585	1830	3657	3405	399
Grp Volume(v), veh/h	75	384	228	377	369	374
Grp Sat Flow(s),veh/h/ln	1753	1585	1830	1781	1841	1866
Q Serve(g_s), s	3.5	20.5	12.3	4.1	13.7	13.7
Cycle Q Clear(g_c), s	3.5	20.5	12.3	4.1	13.7	13.7
Prop In Lane	1.00	1.00	1.00			0.21
Lane Grp Cap(c), veh/h	382	577	267	2346	843	854
V/C Ratio(X)	0.20	0.67	0.85	0.16	0.44	0.44
Avail Cap(c_a), veh/h	382	577	462	2346	843	854
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.3	27.0	42.1	6.6	18.6	18.6
Incr Delay (d2), s/veh	0.2	2.9	7.5	0.1	1.6	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	18.1	5.9	1.4	5.9	5.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	32.5	29.9	49.6	6.7	20.2	20.2
LnGrp LOS	C	C	D	A	C	C
Approach Vol, veh/h	459			605	743	
Approach Delay, s/veh	30.3			22.9	20.2	
Approach LOS	C			C	C	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		73.0		28.0	20.3	52.7
Change Period (Y+Rc), s		6.5		6.0	5.5	6.5
Max Green Setting (Gmax), s		66.5		22.0	25.5	35.5
Max Q Clear Time (g_c+I1), s		6.1		22.5	14.3	15.7
Green Ext Time (p_c), s		18.5		0.0	0.5	15.9
Intersection Summary						
HCM 6th Ctrl Delay			23.7			
HCM 6th LOS			C			

HCM 6th Signalized Intersection Summary
 5: Snouffer School Rd & Cherry Laurel Ln/Mooney Dr

Snouffer School Rd PRSA
 Existing Build



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕		↕	↕↕		↕	↕↕	
Traffic Volume (veh/h)	75	3	7	8	0	28	7	468	90	17	927	10
Future Volume (veh/h)	75	3	7	8	0	28	7	468	90	17	927	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1604	1870	1870	1875	1891	1891	1953	1922	1922
Adj Flow Rate, veh/h	95	4	9	11	0	37	7	498	96	19	1019	11
Peak Hour Factor	0.79	0.79	0.79	0.75	0.75	0.75	0.94	0.94	0.94	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	20	2	2	8	7	7	3	5	5
Cap, veh/h	199	9	11	249	0	173	16	1911	367	620	2449	26
Arrive On Green	0.11	0.11	0.11	0.11	0.00	0.11	0.01	0.64	0.64	0.02	0.66	0.66
Sat Flow, veh/h	992	80	97	1201	0	1585	1786	3007	577	1860	3701	40
Grp Volume(v), veh/h	108	0	0	11	0	37	7	297	297	19	503	527
Grp Sat Flow(s),veh/h/ln	1170	0	0	1201	0	1585	1786	1796	1787	1860	1826	1915
Q Serve(g_s), s	5.4	0.0	0.0	0.0	0.0	1.6	0.3	5.4	5.5	0.3	9.6	9.6
Cycle Q Clear(g_c), s	7.0	0.0	0.0	0.5	0.0	1.6	0.3	5.4	5.5	0.3	9.6	9.6
Prop In Lane	0.88		0.08	1.00		1.00	1.00		0.32	1.00		0.02
Lane Grp Cap(c), veh/h	218	0	0	249	0	173	16	1142	1136	620	1208	1267
V/C Ratio(X)	0.50	0.00	0.00	0.04	0.00	0.21	0.43	0.26	0.26	0.03	0.42	0.42
Avail Cap(c_a), veh/h	336	0	0	350	0	306	131	1142	1136	716	1208	1267
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.5	0.0	0.0	30.0	0.0	30.5	37.0	6.0	6.0	4.7	5.9	5.9
Incr Delay (d2), s/veh	1.7	0.0	0.0	0.1	0.0	0.6	16.9	0.5	0.6	0.0	1.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	0.0	0.2	0.0	0.6	0.2	1.7	1.7	0.1	2.9	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.2	0.0	0.0	30.1	0.0	31.1	53.9	6.5	6.5	4.7	7.0	6.9
LnGrp LOS	D	A	A	C	A	C	D	A	A	A	A	A
Approach Vol, veh/h		108			48			601			1049	
Approach Delay, s/veh		35.2			30.8			7.1			6.9	
Approach LOS		D			C			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.1	54.2		13.7	5.2	56.1		13.7				
Change Period (Y+Rc), s	5.5	6.5		5.5	4.5	6.5		5.5				
Max Green Setting (Gmax), s	5.5	37.5		14.5	5.5	38.5		14.5				
Max Q Clear Time (g_c+I1), s	2.3	7.5		9.0	2.3	11.6		3.6				
Green Ext Time (p_c), s	0.0	0.5		0.1	0.0	0.8		0.1				

Intersection Summary

HCM 6th Ctrl Delay	9.3
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.

HCM Signalized Intersection Capacity Analysis

7: Woodfield Rd & Snouffer School Rd

06/22/2022

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	102	387	136	170	383	156	194	602	204	147	336	136
Future Volume (vph)	102	387	136	170	383	156	194	602	204	147	336	136
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	2000	2000	2000	2000	2000	2000
Total Lost time (s)	6.5	6.5	7.5	6.5	6.5	7.5	7.5	6.5	6.5	7.5	6.5	6.5
Lane Util. Factor	1.00	0.95	1.00	0.91	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1610	3383	1583	1863	3725	1667	1863	3725	1667
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1583	1610	3383	1583	1863	3725	1667	1863	3725	1667
Peak-hour factor, PHF	0.88	0.88	0.88	0.86	0.86	0.86	0.92	0.92	0.92	0.85	0.85	0.85
Adj. Flow (vph)	116	440	155	198	445	181	211	654	222	173	395	160
RTOR Reduction (vph)	0	0	111	0	0	124	0	0	62	0	0	33
Lane Group Flow (vph)	116	440	44	178	465	57	211	654	160	173	395	127
Turn Type	Split	NA	pm+ov	Split	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	3	3	5	4	4	1	1	6	3	5	2	4
Permitted Phases			3			4			6			2
Actuated Green, G (s)	29.8	29.8	51.2	32.4	32.4	56.7	24.3	69.4	99.2	21.4	66.5	98.9
Effective Green, g (s)	29.8	29.8	51.2	32.4	32.4	56.7	24.3	69.4	99.2	21.4	66.5	98.9
Actuated g/C Ratio	0.17	0.17	0.28	0.18	0.18	0.32	0.14	0.39	0.55	0.12	0.37	0.55
Clearance Time (s)	6.5	6.5	7.5	6.5	6.5	7.5	7.5	6.5	6.5	7.5	6.5	6.5
Vehicle Extension (s)	4.0	4.0	3.0	4.0	4.0	3.0	3.0	0.2	4.0	3.0	0.2	4.0
Lane Grp Cap (vph)	293	585	450	289	608	498	251	1436	978	221	1376	915
v/s Ratio Prot	0.07	c0.12	0.01	0.11	c0.14	0.02	c0.11	c0.18	0.03	0.09	0.11	0.02
v/s Ratio Perm			0.02			0.02			0.07			0.05
v/c Ratio	0.40	0.75	0.10	0.62	0.76	0.11	0.84	0.46	0.16	0.78	0.29	0.14
Uniform Delay, d1	67.1	71.6	47.4	68.1	70.2	43.8	76.0	41.2	19.9	77.0	40.0	19.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.96	0.89	1.60	1.00	1.00	1.00
Incremental Delay, d2	1.2	5.8	0.1	4.4	6.0	0.1	20.8	1.0	0.1	16.4	0.5	0.1
Delay (s)	68.3	77.4	47.5	72.5	76.2	43.9	93.4	37.7	32.0	93.4	40.6	19.9
Level of Service	E	E	D	E	E	D	F	D	C	F	D	B
Approach Delay (s)		69.4			68.3			47.3			48.6	
Approach LOS		E			E			D			D	
Intersection Summary												
HCM 2000 Control Delay			57.4				HCM 2000 Level of Service				E	
HCM 2000 Volume to Capacity ratio			0.65									
Actuated Cycle Length (s)			180.0				Sum of lost time (s)				27.0	
Intersection Capacity Utilization			67.3%				ICU Level of Service				C	
Analysis Period (min)			15									

c Critical Lane Group

HCM 6th Signalized Intersection Summary
 1: Snouffer School Rd & Centerway Rd

Snouffer School Rd PRSA
 Existing Build



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	72	336	409	657	437	75
Future Volume (veh/h)	72	336	409	657	437	75
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1969	1969	1969	1969
Adj Flow Rate, veh/h	82	382	454	730	560	96
Peak Hour Factor	0.88	0.88	0.90	0.90	0.78	0.78
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	345	730	500	2545	1176	201
Arrive On Green	0.19	0.19	0.27	0.68	0.37	0.37
Sat Flow, veh/h	1781	1585	1875	3839	3293	546
Grp Volume(v), veh/h	82	382	454	730	327	329
Grp Sat Flow(s),veh/h/ln	1781	1585	1875	1870	1870	1871
Q Serve(g_s), s	3.9	17.0	23.2	7.7	13.3	13.4
Cycle Q Clear(g_c), s	3.9	17.0	23.2	7.7	13.3	13.4
Prop In Lane	1.00	1.00	1.00			0.29
Lane Grp Cap(c), veh/h	345	730	500	2545	689	689
V/C Ratio(X)	0.24	0.52	0.91	0.29	0.48	0.48
Avail Cap(c_a), veh/h	359	743	694	2545	689	689
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.8	19.0	35.2	6.3	24.0	24.0
Incr Delay (d2), s/veh	0.4	0.6	12.4	0.3	2.3	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.1	11.8	2.6	6.0	6.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	34.2	19.7	47.6	6.6	26.3	26.4
LnGrp LOS	C	B	D	A	C	C
Approach Vol, veh/h	464			1184	656	
Approach Delay, s/veh	22.2			22.3	26.4	
Approach LOS	C			C	C	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		74.0		25.2	31.0	43.0
Change Period (Y+Rc), s		6.5		6.0	4.5	6.5
Max Green Setting (Gmax), s		67.5		20.0	36.7	26.3
Max Q Clear Time (g_c+I1), s		9.7		19.0	25.2	15.4
Green Ext Time (p_c), s		37.2		0.2	1.2	8.8
Intersection Summary						
HCM 6th Ctrl Delay			23.4			
HCM 6th LOS			C			

HCM 6th Signalized Intersection Summary
 5: Snouffer School Rd & Cherry Laurel Ln/Mooney Dr

Snouffer School Rd PRSA
 Existing Build



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗		↖	↕		↖	↕	
Traffic Volume (veh/h)	94	1	39	7	2	19	28	850	62	19	663	11
Future Volume (veh/h)	94	1	39	7	2	19	28	850	62	19	663	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1969	1969	1969	1969	1969	1969
Adj Flow Rate, veh/h	125	1	52	10	3	28	30	914	67	23	809	13
Peak Hour Factor	0.75	0.75	0.75	0.68	0.68	0.68	0.93	0.93	0.93	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	209	7	61	289	24	227	55	2209	162	424	2379	38
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.03	0.63	0.63	0.02	0.63	0.63
Sat Flow, veh/h	900	44	390	1350	156	1453	1875	3534	259	1875	3768	61
Grp Volume(v), veh/h	178	0	0	10	0	31	30	484	497	23	402	420
Grp Sat Flow(s),veh/h/ln	1334	0	0	1350	0	1609	1875	1870	1922	1875	1870	1958
Q Serve(g_s), s	10.4	0.0	0.0	0.0	0.0	1.5	1.4	11.8	11.8	0.4	9.1	9.1
Cycle Q Clear(g_c), s	11.9	0.0	0.0	0.6	0.0	1.5	1.4	11.8	11.8	0.4	9.1	9.1
Prop In Lane	0.70		0.29	1.00		0.90	1.00		0.13	1.00		0.03
Lane Grp Cap(c), veh/h	276	0	0	289	0	251	55	1169	1202	424	1181	1236
V/C Ratio(X)	0.64	0.00	0.00	0.03	0.00	0.12	0.55	0.41	0.41	0.05	0.34	0.34
Avail Cap(c_a), veh/h	363	0	0	371	0	349	135	1169	1202	493	1181	1236
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.92	0.92	0.92	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.5	0.0	0.0	32.3	0.0	32.7	43.1	8.5	8.5	6.4	7.8	7.8
Incr Delay (d2), s/veh	2.5	0.0	0.0	0.0	0.0	0.2	7.5	1.0	1.0	0.1	0.8	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	0.0	0.0	0.2	0.0	0.6	0.8	4.3	4.4	0.1	3.3	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.0	0.0	0.0	32.3	0.0	32.9	50.6	9.5	9.5	6.4	8.6	8.5
LnGrp LOS	D	A	A	C	A	C	D	A	A	A	A	A
Approach Vol, veh/h		178			41			1011				845
Approach Delay, s/veh		40.0			32.8			10.7				8.5
Approach LOS		D			C			B				A
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.7	62.8		19.5	7.1	63.3		19.5				
Change Period (Y+Rc), s	5.5	6.5		5.5	4.5	6.5		5.5				
Max Green Setting (Gmax), s	5.5	47.5		19.5	6.5	47.5		19.5				
Max Q Clear Time (g_c+I1), s	2.4	13.8		13.9	3.4	11.1		3.5				
Green Ext Time (p_c), s	0.0	0.8		0.3	0.0	0.6		0.1				

Intersection Summary

HCM 6th Ctrl Delay	12.8
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM Signalized Intersection Capacity Analysis
7: Woodfield Rd & Snouffer School Rd

Snouffer School Rd PRSA
Existing Build

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	173	478	128	135	519	275	171	404	160	153	566	129
Future Volume (vph)	173	478	128	135	519	275	171	404	160	153	566	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	2000	2000	2000	2000	2000	2000
Total Lost time (s)	6.5	6.5	7.5	6.5	6.5	7.5	7.5	6.5	6.5	7.5	6.5	6.5
Lane Util. Factor	1.00	0.95	1.00	0.91	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1610	3386	1583	1863	3725	1667	1863	3725	1667
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1583	1610	3386	1583	1863	3725	1667	1863	3725	1667
Peak-hour factor, PHF	0.90	0.90	0.90	0.95	0.95	0.95	0.86	0.86	0.86	0.96	0.96	0.96
Adj. Flow (vph)	192	531	142	142	546	289	199	470	186	159	590	134
RTOR Reduction (vph)	0	0	98	0	0	142	0	0	55	0	0	32
Lane Group Flow (vph)	192	531	44	128	560	147	199	470	131	159	590	102
Turn Type	Split	NA	pm+ov	Split	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	3	3	5	4	4	1	1	6	3	5	2	4
Permitted Phases			3			4			6			2
Actuated Green, G (s)	35.1	35.1	55.2	36.4	36.4	60.3	23.9	61.4	96.5	20.1	57.6	94.0
Effective Green, g (s)	35.1	35.1	55.2	36.4	36.4	60.3	23.9	61.4	96.5	20.1	57.6	94.0
Actuated g/C Ratio	0.20	0.20	0.31	0.20	0.20	0.33	0.13	0.34	0.54	0.11	0.32	0.52
Clearance Time (s)	6.5	6.5	7.5	6.5	6.5	7.5	7.5	6.5	6.5	7.5	6.5	6.5
Vehicle Extension (s)	4.0	4.0	3.0	4.0	4.0	3.0	3.0	0.2	4.0	3.0	0.2	4.0
Lane Grp Cap (vph)	345	690	485	325	684	530	247	1270	953	208	1192	870
v/s Ratio Prot	0.11	c0.15	0.01	0.08	c0.17	0.04	c0.11	c0.13	0.03	0.09	c0.16	0.02
v/s Ratio Perm			0.02			0.06			0.05			0.04
v/c Ratio	0.56	0.77	0.09	0.39	0.82	0.28	0.81	0.37	0.14	0.76	0.49	0.12
Uniform Delay, d1	65.4	68.6	44.5	62.2	68.6	43.9	75.8	44.7	20.9	77.7	49.4	21.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.99	0.93	1.00	1.00	1.00
Incremental Delay, d2	2.4	5.5	0.1	1.1	7.9	0.3	16.8	0.8	0.1	15.3	1.5	0.1
Delay (s)	67.8	74.1	44.6	63.3	76.6	44.2	88.8	45.1	19.5	93.0	50.9	22.0
Level of Service	E	E	D	E	E	D	F	D	B	F	D	C
Approach Delay (s)		67.9			65.3			49.7			54.1	
Approach LOS		E			E			D			D	
Intersection Summary												
HCM 2000 Control Delay			59.4				HCM 2000 Level of Service				E	
HCM 2000 Volume to Capacity ratio			0.69									
Actuated Cycle Length (s)			180.0				Sum of lost time (s)				27.0	
Intersection Capacity Utilization			73.9%				ICU Level of Service				D	
Analysis Period (min)			15									

c Critical Lane Group

Intersection: 1: Snouffer School Rd & Centerway Rd

Movement	EB	EB	NB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	T	TR
Maximum Queue (ft)	107	175	160	107	85	169	163
Average Queue (ft)	50	82	72	20	31	96	57
95th Queue (ft)	95	137	132	69	76	168	123
Link Distance (ft)		652		305	305	606	606
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	170		160				
Storage Blk Time (%)		0	0	0			
Queuing Penalty (veh)		0	1	0			

Intersection: 2: Flower Hill Way/Earhart Ct & Snouffer School Rd

Movement	EB	WB	NB	SB
Directions Served	L	L	LTR	LTR
Maximum Queue (ft)	17	28	81	45
Average Queue (ft)	1	5	33	15
95th Queue (ft)	7	24	63	41
Link Distance (ft)			308	201
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	150	180		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: Snouffer School Rd & Bonanza Way

Movement	SE	NW	NE	SW	SW
Directions Served	L	L	LTR	LT	R
Maximum Queue (ft)	39	27	64	51	64
Average Queue (ft)	16	1	19	15	18
95th Queue (ft)	36	13	51	43	49
Link Distance (ft)			72	152	152
Upstream Blk Time (%)			1		
Queuing Penalty (veh)			0		
Storage Bay Dist (ft)	160	180			
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 4: Carriage Walk Dr & Snouffer School Rd

Movement	NW	NE
Directions Served	LT	LR
Maximum Queue (ft)	51	46
Average Queue (ft)	4	22
95th Queue (ft)	25	49
Link Distance (ft)	850	105
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: Snouffer School Rd & Cherry Laurel Ln/Mooney Dr

Movement	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	L	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	173	57	77	28	127	143	43	137	154
Average Queue (ft)	71	11	23	3	30	47	9	40	52
95th Queue (ft)	138	40	55	16	90	117	29	103	124
Link Distance (ft)	397	571			1037	1037		850	850
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			105	230			245		
Storage Blk Time (%)			0						
Queuing Penalty (veh)			0						

Intersection: 6: Sweet Autumn Dr & Snouffer School Rd

Movement	EB	WB	NE	SW
Directions Served	LT	LT	LTR	LTR
Maximum Queue (ft)	7	57	57	50
Average Queue (ft)	0	3	21	16
95th Queue (ft)	4	20	45	41
Link Distance (ft)	1037	124	154	155
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 7: Woodfield Rd & Snouffer School Rd

Movement	NB	NB	NB	NB	SB	SB	SB	SE	SE	SE	NW	NW
Directions Served	L	T	T	R	UL	LT	T	UL	T	T	UL	T
Maximum Queue (ft)	184	296	259	47	252	356	288	217	295	292	184	273
Average Queue (ft)	85	190	159	3	136	223	183	104	182	185	74	147
95th Queue (ft)	152	256	218	39	252	315	260	180	283	290	141	238
Link Distance (ft)		498	498			1032	1032		621	621		778
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	370			450	220			260			370	
Storage Blk Time (%)					0	9			1			0
Queuing Penalty (veh)					1	8			2			0

Intersection: 7: Woodfield Rd & Snouffer School Rd

Movement	NW
Directions Served	TR
Maximum Queue (ft)	239
Average Queue (ft)	98
95th Queue (ft)	216
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	350
Storage Blk Time (%)	0
Queuing Penalty (veh)	0

Intersection: 15: Bend

Movement	WB
Directions Served	T
Maximum Queue (ft)	166
Average Queue (ft)	6
95th Queue (ft)	95
Link Distance (ft)	498
Upstream Blk Time (%)	0
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 12

Intersection: 1: Snouffer School Rd & Centerway Rd

Movement	EB	EB	NB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	T	TR
Maximum Queue (ft)	134	164	205	292	137	152	159
Average Queue (ft)	55	77	126	56	55	75	59
95th Queue (ft)	108	137	208	185	111	135	122
Link Distance (ft)		656		310	310	565	565
Upstream Blk Time (%)				0			
Queuing Penalty (veh)				0			
Storage Bay Dist (ft)	170		160				
Storage Blk Time (%)	0	0	7	0			
Queuing Penalty (veh)	0	0	25	0			

Intersection: 2: Flower Hill Rd/Earhart Ct & Snouffer School Rd

Movement	EB	EB	WB	NB	SB
Directions Served	L	TR	L	LTR	LTR
Maximum Queue (ft)	30	14	38	110	82
Average Queue (ft)	5	1	9	36	37
95th Queue (ft)	23	6	33	78	74
Link Distance (ft)		1093		309	205
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	150		180		
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 3: Bonanza Way & Snouffer School Rd

Movement	SE	NW	NE	SW	SW
Directions Served	L	L	LTR	LT	R
Maximum Queue (ft)	59	28	29	64	109
Average Queue (ft)	21	3	2	24	46
95th Queue (ft)	49	18	15	50	76
Link Distance (ft)			71	152	152
Upstream Blk Time (%)					0
Queuing Penalty (veh)					0
Storage Bay Dist (ft)	160	180			
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 4: Carriag Walk Dr & Snouffer School Rd

Movement	NW	NE
Directions Served	LT	LR
Maximum Queue (ft)	103	53
Average Queue (ft)	18	23
95th Queue (ft)	66	51
Link Distance (ft)	854	106
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: Snouffer School Rd & Cherry Laurel Ln/Mooney Dr

Movement	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	L	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	230	36	58	58	198	224	42	128	126
Average Queue (ft)	102	5	17	14	64	71	12	43	48
95th Queue (ft)	177	22	47	43	157	170	34	97	105
Link Distance (ft)	397	570			1038	1038		854	854
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			105	230			245		
Storage Blk Time (%)					0				
Queuing Penalty (veh)					0				

Intersection: 6: Sweet Autumn Dr & Snouffer School Rd

Movement	EB	EB	WB	WB	NE	SW
Directions Served	LT	TR	ULT	TR	LTR	LTR
Maximum Queue (ft)	22	13	86	40	52	97
Average Queue (ft)	1	1	18	3	20	30
95th Queue (ft)	11	7	63	29	47	66
Link Distance (ft)	1038	1038	124	124	153	155
Upstream Blk Time (%)			0	0		
Queuing Penalty (veh)			0	0		
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 7: Woodfield Rd & Snouffer School Rd

Movement	NB	NB	NB	SB	SB	SB	SE	SE	SE	NW	NW	NW
Directions Served	L	T	T	L	LT	T	UL	T	T	UL	T	TR
Maximum Queue (ft)	268	305	279	265	426	381	226	210	223	174	346	306
Average Queue (ft)	121	206	171	174	299	244	109	110	121	74	222	193
95th Queue (ft)	212	283	247	315	414	349	190	180	198	141	313	284
Link Distance (ft)		525	525		1032	1032		623	623		778	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	370			220			260			370		350
Storage Blk Time (%)				0	27		0	0			0	0
Queuing Penalty (veh)				1	19		0	0			1	0

Network Summary

Network wide Queuing Penalty: 46

Intersection: 1: Snouffer School Rd & Centerway Rd

Movement	EB	EB	NB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	T	TR
Maximum Queue (ft)	106	143	199	210	94	238	215
Average Queue (ft)	46	71	117	30	28	132	94
95th Queue (ft)	87	122	192	124	75	213	185
Link Distance (ft)		652		305	305	606	606
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	170		160				
Storage Blk Time (%)		0	5	0			
Queuing Penalty (veh)		0	8	0			

Intersection: 2: Flower Hill Way/Earhart Ct & Snouffer School Rd

Movement	EB	EB	EB	WB	NB	SB
Directions Served	L	T	TR	L	LTR	LTR
Maximum Queue (ft)	22	2	7	40	71	37
Average Queue (ft)	2	0	0	7	30	13
95th Queue (ft)	12	3	4	28	59	38
Link Distance (ft)		1091	1091		308	201
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	150			180		
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 3: Snouffer School Rd & Bonanza Way

Movement	SE	SE	SE	NW	NW	NW	NE	SW	SW
Directions Served	L	T	TR	L	T	TR	LTR	LT	R
Maximum Queue (ft)	55	98	106	29	114	117	47	43	48
Average Queue (ft)	19	23	30	3	37	42	15	11	17
95th Queue (ft)	43	67	78	15	88	94	42	37	44
Link Distance (ft)		596	596		1112	1112	72	152	152
Upstream Blk Time (%)							0		
Queuing Penalty (veh)							0		
Storage Bay Dist (ft)	160			180					
Storage Blk Time (%)									
Queuing Penalty (veh)									

Intersection: 4: Carriage Walk Dr & Snouffer School Rd

Movement	NW	NE
Directions Served	LT	LR
Maximum Queue (ft)	38	61
Average Queue (ft)	3	23
95th Queue (ft)	19	51
Link Distance (ft)	850	105
Upstream Blk Time (%)		0
Queuing Penalty (veh)		0
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: Snouffer School Rd & Cherry Laurel Ln/Mooney Dr

Movement	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	L	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	142	46	55	36	130	164	35	164	180
Average Queue (ft)	60	9	21	6	29	45	6	45	51
95th Queue (ft)	116	33	50	24	94	125	24	117	129
Link Distance (ft)	397	571			1037	1037		850	850
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			105	230			245		
Storage Blk Time (%)									
Queuing Penalty (veh)									

Intersection: 6: Sweet Autumn Dr & Snouffer School Rd

Movement	EB	EB	EB	WB	WB	WB	NE	SW
Directions Served	L	T	TR	L	T	TR	LTR	LTR
Maximum Queue (ft)	14	57	66	32	50	68	63	75
Average Queue (ft)	1	7	10	4	4	10	22	26
95th Queue (ft)	7	32	39	21	25	41	51	62
Link Distance (ft)		1037	1037		124	124	153	155
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	125			100				
Storage Blk Time (%)						0		
Queuing Penalty (veh)						0		

Intersection: 7: Woodfield Rd & Snouffer School Rd

Movement	NB	NB	NB	NB	SB	SB	SB	SB	SE	SE	SE	SE
Directions Served	L	T	T	R	L	LT	T	R	L	T	T	R
Maximum Queue (ft)	229	325	285	114	264	403	357	67	320	390	361	123
Average Queue (ft)	92	205	172	52	161	243	195	33	197	202	200	36
95th Queue (ft)	177	290	256	93	281	339	296	57	325	353	324	89
Link Distance (ft)		491	491			1015	1015			604	604	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	370			450	220			840	260			625
Storage Blk Time (%)		0			0	16			9	2		
Queuing Penalty (veh)		0			1	14			26	5		

Intersection: 7: Woodfield Rd & Snouffer School Rd

Movement	NW	NW	NW	NW
Directions Served	L	T	T	R
Maximum Queue (ft)	296	232	213	115
Average Queue (ft)	138	127	96	36
95th Queue (ft)	249	210	197	104
Link Distance (ft)		762	762	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	370			40
Storage Blk Time (%)	0		27	2
Queuing Penalty (veh)	0		38	3

Network Summary

Network wide Queuing Penalty: 95

Intersection: 1: Snouffer School Rd & Centerway Rd

Movement	EB	EB	NB	NB	NB	B10	B10	SB	SB
Directions Served	L	R	L	T	T	T	T	T	TR
Maximum Queue (ft)	104	160	204	376	289	61	5	210	210
Average Queue (ft)	48	62	169	133	60	3	0	106	85
95th Queue (ft)	89	113	237	361	169	33	5	178	167
Link Distance (ft)		656		310	310	1093	1093	565	565
Upstream Blk Time (%)				2	0				
Queuing Penalty (veh)				12	0				
Storage Bay Dist (ft)	170		160						
Storage Blk Time (%)		0	17	0					
Queuing Penalty (veh)		0	56	1					

Intersection: 2: Flower Hill Rd/Earhart Ct & Snouffer School Rd

Movement	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	TR	L	T	TR	LTR	LTR
Maximum Queue (ft)	31	11	41	4	2	124	96
Average Queue (ft)	6	0	10	0	0	44	30
95th Queue (ft)	25	7	35	4	2	98	70
Link Distance (ft)		1093		597	597	309	205
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	150		180				
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 3: Bonanza Way & Snouffer School Rd

Movement	SE	SE	SE	NW	NW	NW	NE	SW	SW
Directions Served	L	T	TR	L	T	TR	LTR	LT	R
Maximum Queue (ft)	58	89	108	29	245	195	25	65	85
Average Queue (ft)	23	26	36	5	85	78	2	22	40
95th Queue (ft)	47	68	86	22	180	158	13	53	70
Link Distance (ft)		597	597		1112	1112	71	152	152
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	160			180					
Storage Blk Time (%)						0			
Queuing Penalty (veh)						0			

Intersection: 4: Carriag Walk Dr & Snouffer School Rd

Movement	SE	NW	NW	NE
Directions Served	TR	LT	T	LR
Maximum Queue (ft)	4	79	18	64
Average Queue (ft)	0	12	1	22
95th Queue (ft)	3	48	13	54
Link Distance (ft)	1112	854	854	106
Upstream Blk Time (%)				0
Queuing Penalty (veh)				0
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Snouffer School Rd & Cherry Laurel Ln/Mooney Dr

Movement	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	L	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	184	37	50	74	140	146	42	145	160
Average Queue (ft)	84	6	17	25	36	43	12	46	59
95th Queue (ft)	151	26	45	60	104	110	34	108	129
Link Distance (ft)	397	570			1038	1038		854	854
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			105	230			245		
Storage Blk Time (%)									
Queuing Penalty (veh)									

Intersection: 6: Sweet Autumn Dr & Snouffer School Rd

Movement	EB	EB	EB	WB	WB	WB	B19	NE	SW
Directions Served	L	T	TR	L	T	TR	T	LTR	LTR
Maximum Queue (ft)	13	116	122	52	114	131	3	55	90
Average Queue (ft)	1	23	31	11	29	36	0	19	29
95th Queue (ft)	7	77	93	37	87	100	3	45	71
Link Distance (ft)		1038	1038		124	124	606	153	155
Upstream Blk Time (%)					0	0			0
Queuing Penalty (veh)					0	1			0
Storage Bay Dist (ft)	125			100					
Storage Blk Time (%)		0			0				
Queuing Penalty (veh)		0			0				

Intersection: 7: Woodfield Rd & Snouffer School Rd

Movement	NB	NB	NB	NB	SB	SB	SB	SB	SE	SE	SE	SE
Directions Served	L	T	T	R	L	LT	T	R	L	T	T	R
Maximum Queue (ft)	292	386	345	96	265	487	447	126	318	285	276	108
Average Queue (ft)	145	241	203	42	186	295	252	49	168	129	139	29
95th Queue (ft)	250	349	310	79	308	419	375	90	278	228	234	77
Link Distance (ft)		518	518			1015	1015			606	606	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	370			450	220			840	260			625
Storage Blk Time (%)		0			0	28			4	0		
Queuing Penalty (veh)		1			1	19			7	1		

Intersection: 7: Woodfield Rd & Snouffer School Rd

Movement	NW	NW	NW	NW
Directions Served	L	T	T	R
Maximum Queue (ft)	269	375	368	115
Average Queue (ft)	144	213	196	53
95th Queue (ft)	240	336	342	138
Link Distance (ft)		761	761	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	370			40
Storage Blk Time (%)		0	45	1
Queuing Penalty (veh)		1	57	3

Network Summary

Network wide Queuing Penalty: 161
